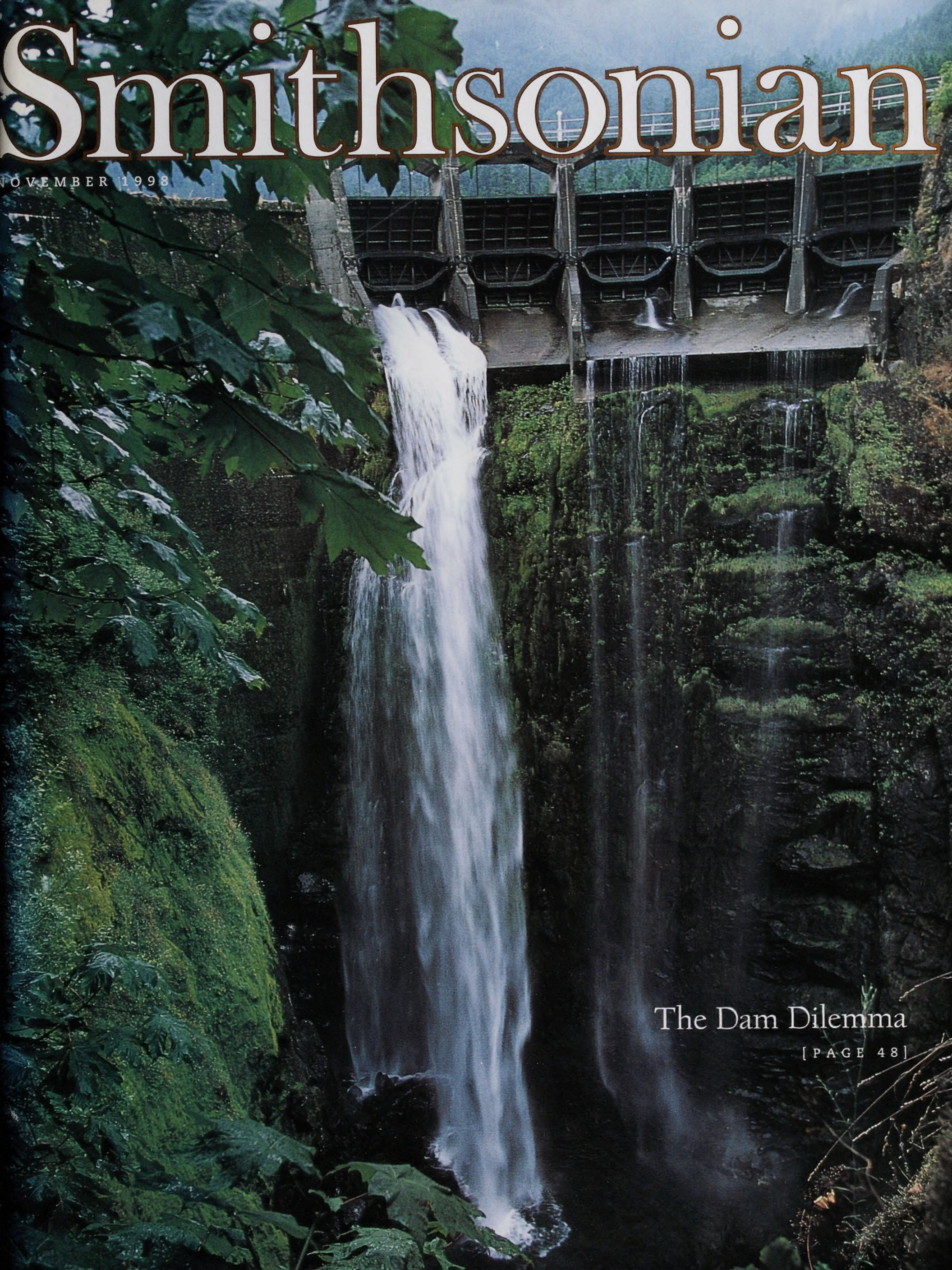
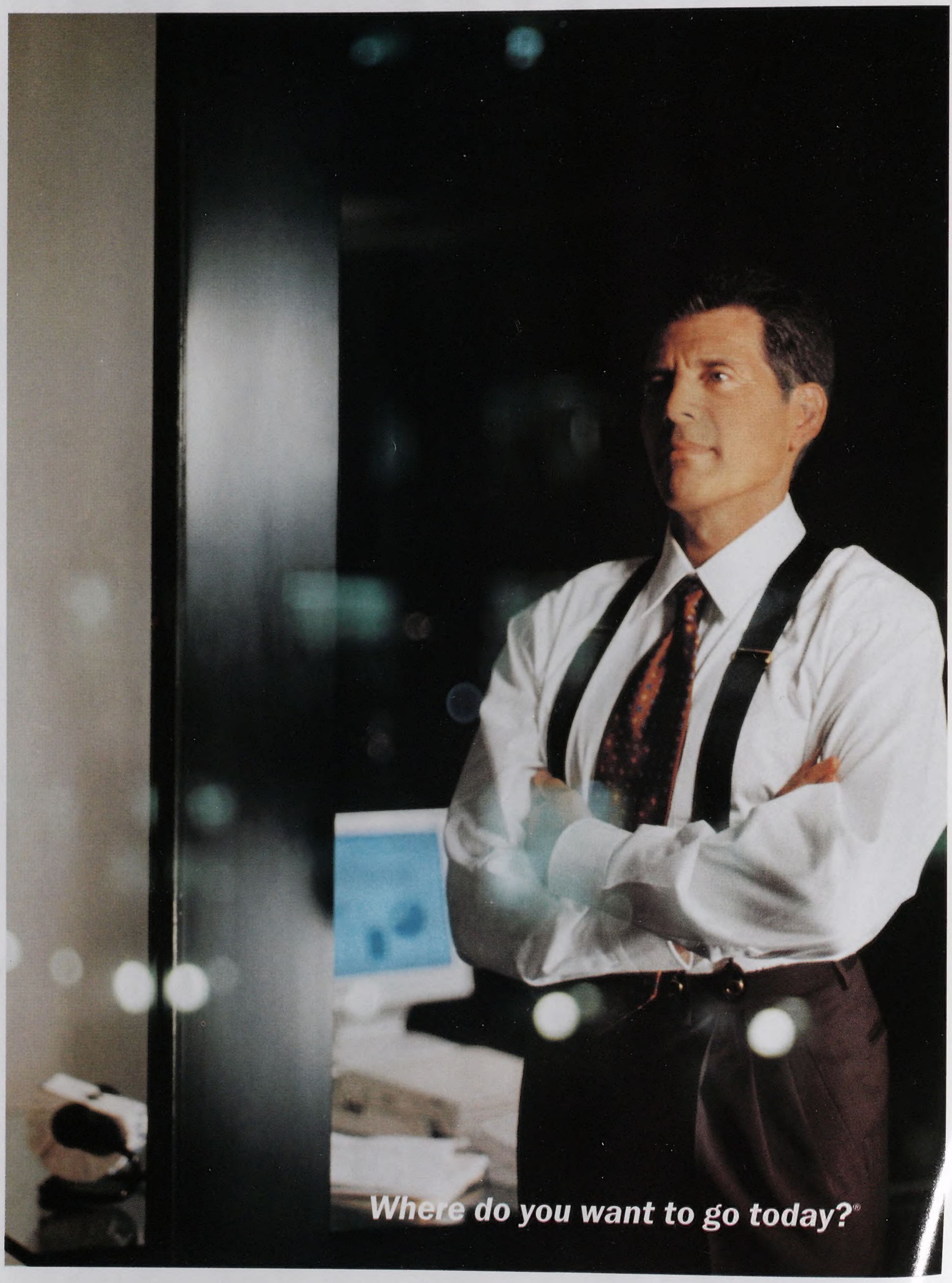
Smithsonian

NOVEMBER 1998



The Dam Dilemma

[PAGE 48]


Where do you want to go today?®

Wouldn't it be great if your computer could_____?

Well, if somebody can imagine it, chances are your computer will someday do it. Amazing things. Useful things. Silly things.

And of course, this says more about people than it does about computers. People are born to innovate, invent and create. People love to get stuff done.

And we make tools that help.

Microsoft®

www.microsoft.com

©1998 Microsoft Corporation. All rights reserved. Microsoft and *Where do you want to go today?* are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

SMITHSONIAN

features

NOVEMBER 1998 ♜ VOLUME 29, NUMBER 8

48 The Battle of the Dams
As our dams age and are superseded by other energy producers, the floodgates are opening on a controversial idea
BY PATRICK JOSEPH ♜ PHOTOGRAPHS BY GLENN OAKLEY

64 Protect & Serve
For police in a small town, a typical shift may include chasing a couple of car thieves or counseling a troubled child
BY RICHARD WOLKOMIR ♜ PHOTOGRAPHS BY RICHARD HOWARD

82 The Sargasso Sea
In waters once feared by sailors for their tangling weed, scientists unravel the secrets of a unique open-ocean ecosystem
BY HENRY GENTHE

96 Jackson Pollock: Modernism's Shooting Star
Famous for his paint-dripped canvases, the artist created in his 44 years some of this century's most important abstract works
BY PHYLLIS TUCHMAN

110 The Bosporus: A Disaster Waiting to Happen
Huge tankers full of crude and liquid gas ply the world's busiest strait unpiloted, and the traffic is about to get worse
BY RUDOLPH CHELMINSKI ♜ PHOTOGRAPHS BY ROBERT WALLIS

124 Muscle Beach
Human pyramids, acrobats and bodybuilders strutted their stuff at this outdoor gym where America's fitness craze began
BY KEN CHOWDER ♜ PHOTOGRAPHS BY GERRY GROPP

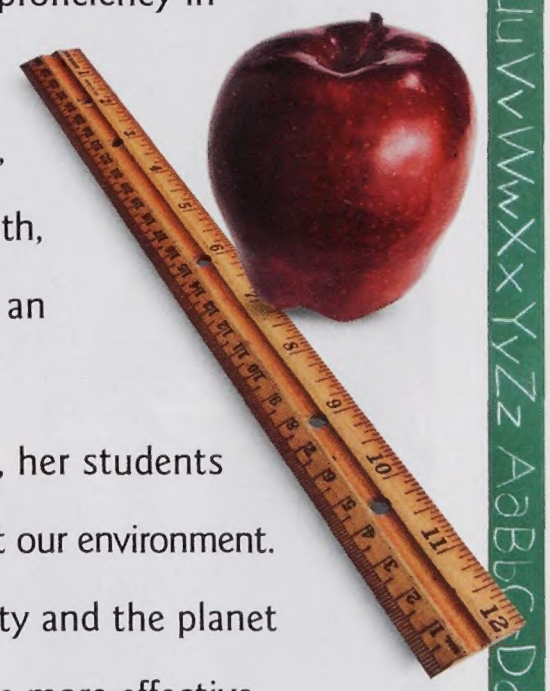
138 Old News Is Good News
As schools and libraries shed their newspapers, dealers like Bob Mooers find collectors still eager to "read all about it"
BY EUGENE L. MEYER

148 Together They Stay a World Apart
Living, working and worshiping as a group, Hutterite communities carry out what they believe is God's plan
PHOTOGRAPHS BY ANDREW HOLBROOKE

156 Chief Justice Marshall Takes the Law in Hand
In the struggle between federal authority and states' rights, the brilliant jurist ruled in favor of the Constitution—as he read it
BY ROBERT WERNICK

Actually, Ms. Santiago's students are some of Patten Elementary's most popular teachers.

Learning is never an easy task. Especially for students faced with physical and emotional challenges, as well as limited proficiency in English. But, it's with children like these that Theresa Santiago truly shines. Using her students' natural interest in the environment, Ms. Santiago designed a program of lesson plans that combined math, science, language arts and other elements of the curriculum into an ecological theme.



Through the use of puppetry, and other hands-on projects, her students learned to "teach" their families and students in other classes about our environment. And how they could all help take care of the school, their community and the planet we all share. As a result, these special-needs students have become more effective pupils, as well as budding leaders within their community.

For showing them that teaching others is often the greatest way to learn about yourself, State Farm is proud to present Theresa Santiago of Edward J. Patten Elementary School in Perth Amboy, New Jersey with our Good Neighbor Award, and to donate $5,000 to the educational institution of her choice.

STATE FARM INSURANCE

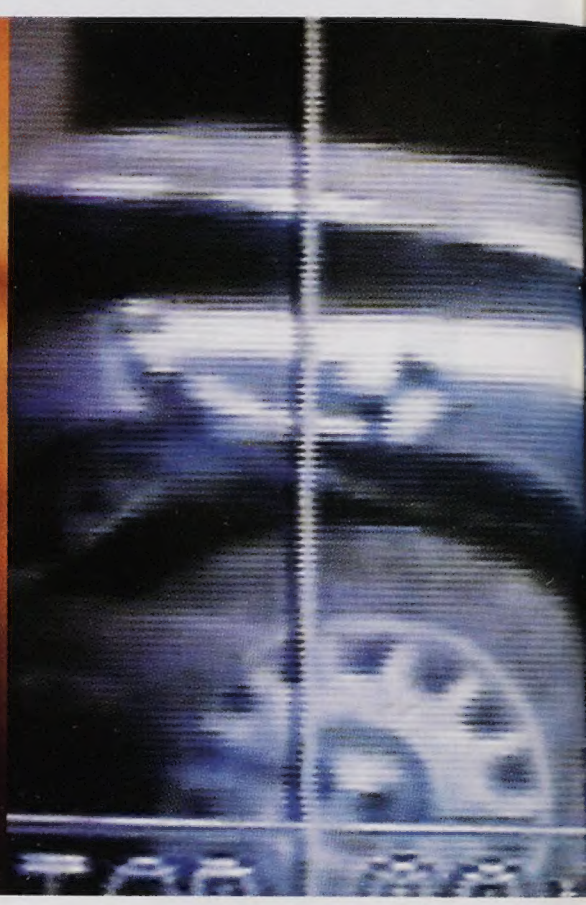
Good Neighbor Award

STATE FARM INSURANCE COMPANIES
Home Offices: Bloomington, Illinois
www.statefarm.com

The Good Neighbor Award was developed in cooperation with the Council for Exceptional Children.

There was a lot of crumpled sheet metal.

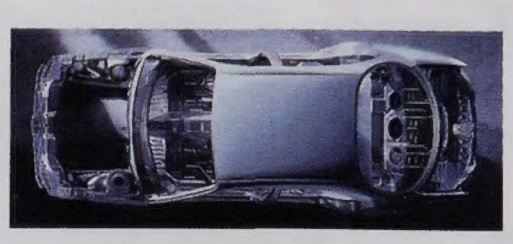
A lot of shattered glass. But



we walked away from government front crash

for a sedan starting under $20,000.** The highest rating you can get.

Sure, it's a historic first. But then, what else would you expect

from a car  that's built to last?

*Driver and passenger front crash test. Government '99 MY data only useful in comparing vehicles within 500 pounds. **1999 Taurus SE shown MSRP $18,995. Tax, title extra.
†Always wear your safety belt and secure children in the rear seat.

tests* with the only five-star rating ★★★★★

Ford Taurus

Second Generation airbags† Energy-absorbing crumple zones.
Side door intrusion beams. 3.0-Liter V6.

Built Ford to Last

1-800-258-FORD or
www.fordvehicles.com

SMITHSONIAN

departments

NOVEMBER 1998 ♜ VOLUME 29, NUMBER 8

Cover

Cover Water from Lake Mills Reservoir is released through a spillway gate in Glines Canyon Dam on the Elwha River, on Washington's Olympic Peninsula. The 210-foot-tall structure, completed in 1927, was built as a hydroelectric project.
PHOTOGRAPH BY GLENN OAKLEY

14 Letters to the Editor

81 Smithsonian Study Tours

174 Additional Sources

12 Smithsonian Perspectives
Engaging a Child's Mind
BY SECRETARY I. MICHAEL HEYMAN

20 Around the Mall & Beyond
Movie Magic on the Mall
BY MICHAEL KERNAN

23 Book Reviews
SMITHSONIAN's Notable Books for Children, 1998
BY KATHLEEN BURKE

36 The Object at Hand
The Vote that Failed
BY S. J. ACKERMAN

40 Smithsonian Highlights
Close Calls in Life and Art
Highlights Calendar starts on page 42

176 The Last Page
The Hit Parade from Hell
BY KEN BUDD

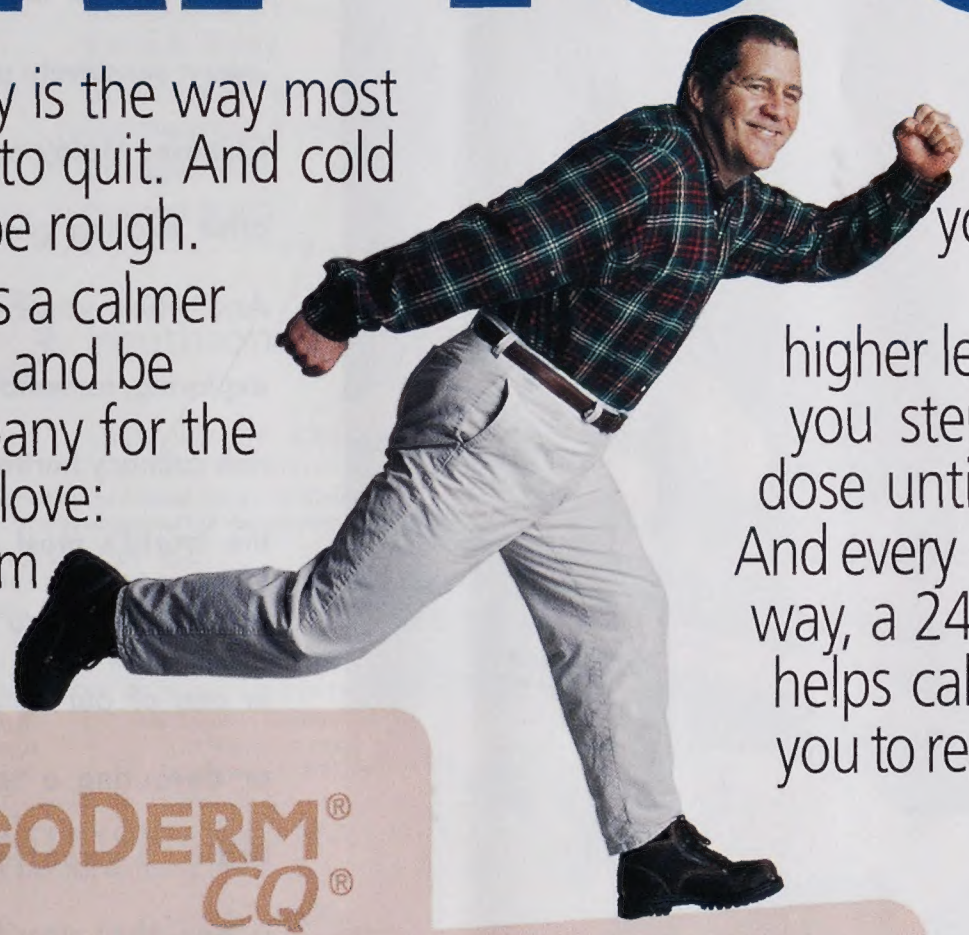
23

40

A CALMER WAY TO QUIT.

Cold turkey is the way most smokers try to quit. And cold turkey can be rough.

But there is a calmer way to quit, and be better company for the people you love: the NicoDerm CQ way.



You're most vulnerable to nicotine cravings when you first start to quit. So CQ starts you off with a higher level of medicine.* Gradually you step down your dose until you're free. And every day along the way, a 24-hour stream of medicine helps calm the cravings that tempt you to reach for that first cigarette.**

Partners in Helping You Quit
AMERICAN CANCER SOCIETY®

No stop-smoking aid can be a substitute for commitment. But once the will is there, CQ's a powerful help.

Success improves when used as directed in users guide.

*Light smokers start at Step 2.

**If you wear it for 24 hours.

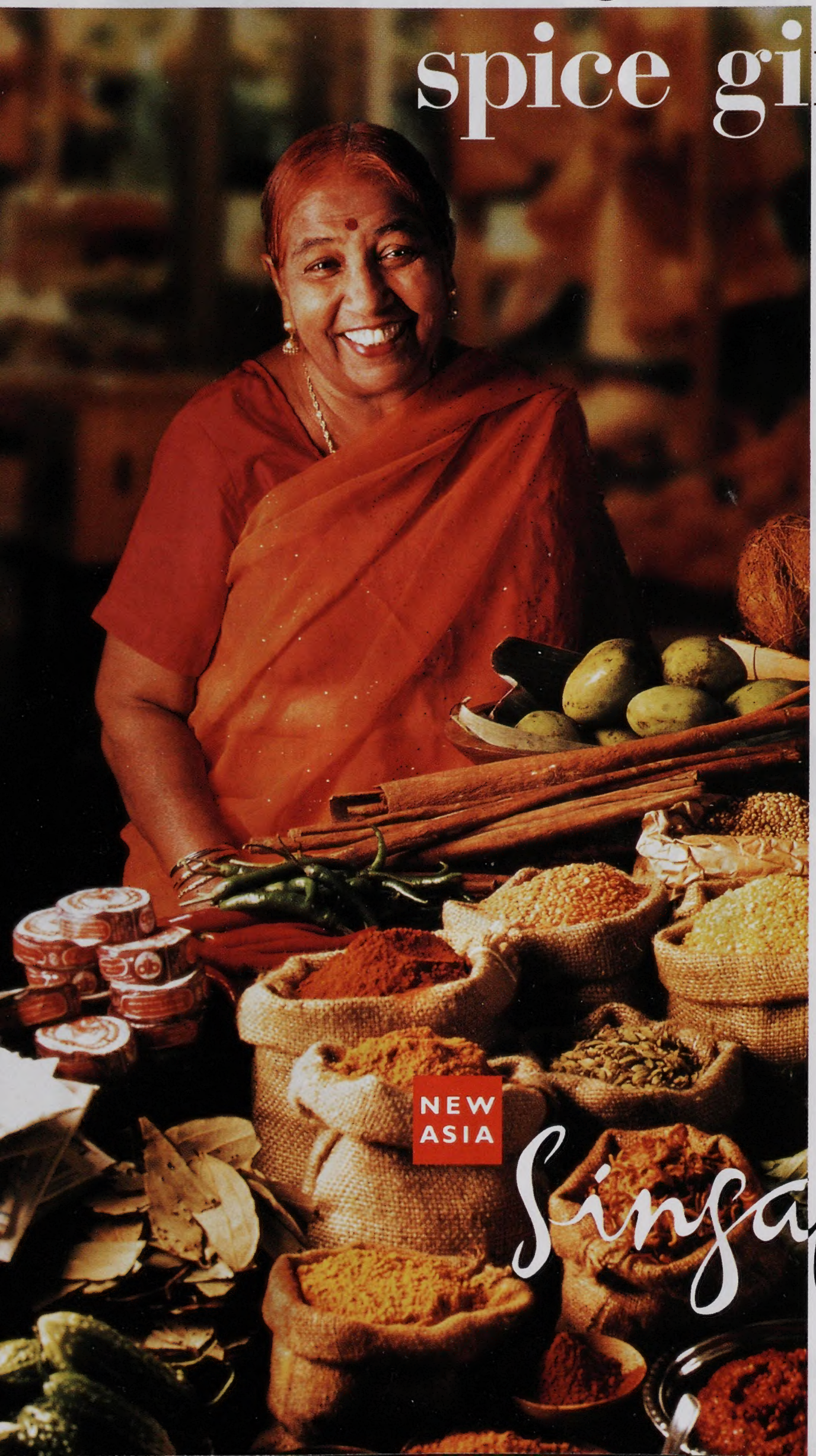
Quitting is difficult. Individual results may vary.

SmithKline Beecham makes an annual grant to the American Cancer Society to support its cancer fighting mission.

SB ©1998 SmithKline Beecham Consumer Healthcare

The power to calm. The power to comfort. The power to help you quit.

Could this be the original spice girl?



With its gleaming skyscrapers and sophisticated shopping malls, modern Singapore is truly the face of New Asia. Yet the old Asia is never far away: sensitively preserved Colonial, Chinese, Malay and Indian quarters offer exciting glimpses of the past. And when you need a break from exploring, remember that Singapore's rich culinary heritage makes it one of the world's most exciting places to eat. Whether you're sampling satay in one of our renowned food stalls or devouring a spicy curry in Little India, a vacation in Singapore is one that you'll savor forever.

Singapore

**So easy to enjoy,
so hard to forget.**

For a free video and information, call the Singapore Tourism Board at 800.944.8778 or visit our website at www.singapore-usa.com

Smithsonian

SECRETARY OF THE SMITHSONIAN INSTITUTION
I. Michael Heyman

EDITOR
Don Moser

BOARD OF EDITORS
Kathleen M. Burke
Suzanne Crawford
Jim Doherty
Timothy Foote
Marlane A. Liddell
Sally Scott Maran
Edgar Rich, *Pictures*
John P. Wiley, Jr.

ASSOCIATE EDITORS
Diane M. Bolz
Bruce Hathaway
Lucinda Moore
Beth Py-Lieberman
Ruth Ravenel
Bonnie Stutski, *Pictures*

ASSISTANT EDITORS
Caneel Cotton, *Pictures*
Elizabeth J. Erskine
Lyn Garrity
Marian Smith Holmes
Valerie Jablow
Karen Larkins
Alison C. McLean
Christian Moen
Minna Morse
Sadie Quarrier, *Pictures*

ARTICLES ASSISTANT
Angela M. Pleasants

RESEARCH ASSISTANTS
Karla A. Henry
Carolyn McGhee

CONTRIBUTING EDITORS
Constance A. Bond
Edwards Park
Bennett Schiff
Nancy Seaman
Paul Trachtman

Smithsonian Institution

BOARD OF REGENTS

EX OFFICIO
Chief Justice of the United States, William H. Rehnquist, *Chancellor*
Vice President of the United States, Albert Gore, Jr.

APPOINTED BY THE PRESIDENT OF THE SENATE
Hon. Thad Cochran
Hon. Bill Frist
Hon. Daniel P. Moynihan

APPOINTED BY THE SPEAKER OF THE HOUSE
Hon. Sam Johnson
Hon. Bob Livingston
Hon. Esteban E. Torres

APPOINTED BY JOINT RESOLUTION OF CONGRESS
Hon. Howard H. Baker, Jr.
Hon. Barber B. Conable, Jr.
Ms. Anne d'Harnoncourt
Mr. Louis V. Gerstner, Jr.
Dr. Hanna H. Gray
Dr. Manuel L. Ibáñez
Dr. Homer A. Neal
Mr. Frank A. Shrontz
Mr. Wesley S. Williams, Jr.

SMITHSONIAN NATIONAL BOARD

Mrs. Jean Bronson Mahoney, Chair *Hon. Frank A.Weil, Vice Chair*

Hon. Max N. Berry
Mrs. Laura Lee Blanton
Mrs. Carolyn Blount
Mrs. John M. Bradley
Mr. Stephen F. Brauer
Hon. Henry E. Catto
Mr. Peter R. Coneway
Mr. Thomas E. Congdon
Mr. Frank Arthur Daniels, Jr.
Mr. Archie W. Dunham
Dr. Sylvia Earle
Mrs. Jane Eisner
Mrs. Patricia Frost
Ms. Nely Galan
Mr. Bert Getz
Mr. Stephen Hamblett
Mr. Paul Hertelendy
Mr. Roger Horchow
Mr. Robert L. James
Mrs. Donald W. Jeffries
Mrs. Dona Kendall
Mrs. James Kinnear
Mrs. Marie L. Knowles
Hon. Marc Leland
Mr. Donald G. Lubin
Ms. Elizabeth S. MacMillan
Mr. John Macomber
Mrs. John W. Madigan
Mr. Frank N. Magid
Mrs. John F. Mars
Mr. Michael P. McBride
Mrs. Nan Tucker McEvoy
Mr. Kenneth B. Miller
Hon. Norman Y. Mineta
Mr. Thomas D. Mullins
Mr. John Nelson
Mrs. Joan Noto
Mr. Heinz C. Prechter
Mrs. Charles H. Price
Baron Eric de Rothschild
Mr. A. R. Sanchez
Mr. David M. Silfen
Hon. Alan K. Simpson
Ms. Kathy Daubert Smith
Mr. Kenneth L. Smith
Mr. C. D. Spangler
Mr. Kelso F. Sutton
Mrs. Nancy Brown Wellin
Mr. Anthony Welters
Mr. Daniel W. Yohannes

HONORARY MEMBERS
Mr. Robert McC. Adams
Mr. William S. Anderson
Mr. Richard P. Cooley
Mr. Joseph F. Cullman III
Mr. Charles D. Dickey, Jr.
Mr. Alfred C. Glassell, Jr.
Hon. George C. McGhee
Justice Sandra D. O'Connor
Mr. S. Dillon Ripley
Mr. Francis C. Rooney, Jr.
Mr. Wilbur L. Ross, Jr.
Mr. Lloyd G. Schermer
Mrs. Gay F. Wray

Hot deal: Asia from $888.*

AROMATIC curries. Innovative New Asian Cuisine. Pungent chili crab. Yours to savor when you begin your Asian vacation with 5 nights on the tempting island of Singapore.

AT the crossroads of Asia, Singapore is a natural gateway to the enchanting lands of Asia.

DISCOVER the charms of mystical Bali, 3 nights from $480.** Explore the breathtaking palaces of Bangkok, 3 nights from $360.**

COMPOSE your own itinerary in Asia and create the vacation of your dreams.

Call your travel agent for details.

Asian Affair Holidays
SINGAPORE AIRLINES

For a FREE brochure, call 800 742-3133

NEW ASIA
Singapore
So easy to enjoy, so hard to forget.

*Singapore Grande Treasures package rate is per person, double occupancy based on departure from Los Angeles or San Francisco. Rate is $988 from New York. Includes round-trip airfare, transfers, 5 nights hotel accommodations in Singapore, daily breakfasts and city tour. **Add-On Affair packages are extensions from Singapore. Prices do not include international departure tax, customs users fee or passenger facility charges of up to $51 per person, depending on itinerary. Approximate per passenger foreign departure taxes also are not included: Indonesia $4; Thailand $10. Prices valid for travel through March 31, 1999. Seasonal surcharges and blackout dates may apply. Other restrictions may also apply.

World admired pleasures sculpt each sparkling day at The Cloister on Sea Island, Georgia.

Legendary sports—golf, tennis, private beach and Beach Club, Shooting School, seaside Spa. Dining, dancing, shining service. 22 consecutive years of Mobil 5-Star recognition, seventy years of devotion to generations of families who return time after time to this happy isle.

Visit us soon, won't you? Call 800-SEA ISLAnd.
The Cloister,® Sea Island, Georgia 31561.

Sea Island® THE CLOISTER®

www.seaisland.com Home rentals and real estate available. Outside US, 912-638-3611.

Cruise Sea of Cortés

Explore Our Mexico

Visit pristine beaches. Spy sea lions and whales basking in the sun. Awaken to the beauty of the Sea of Cortés and the drama of Copper Canyon.

This is Our Mexico. A land of enchantment, steeped in history and surrounded by spectacular scenery. Experience this region's magic aboard our intimate and casual small-ship cruises.

FOR A FREE BROCHURE,
CALL 800-888-9378 OR
CONTACT YOUR TRAVEL PROFESSIONAL.

CruiseWest®
Small-Ship Cruising, Naturally
www.cruisewest.com

Smithsonian

EDITORIAL & PUBLISHING OFFICES:
900 Jefferson Drive, SW
Rm 1301, MRC 406
Washington, D.C. 20560

INTERNET ADDRESS:
www.smithsonianmag.si.edu

SUBSCRIPTIONS: 1-800-766-2149
[outside of U.S., call 1-904-445-4662]

PUBLISHER
Ronald C. Walker
Michelle A. McMahon,
Executive Assistant

ADMINISTRATION
Carey O. Randall,
Associate Publisher
Valerie Martin,
Business Manager

CIRCULATION
Liberta Abbondante, *Director*
Carolyn Topak,
Marketing Director
Elizabeth Hopkins,
Planning Director
Andrea Sole, *Fulfillment Director*

PRODUCTION
E. Cherry Doyle, *Director*
Greg Williams, *Quality Manager*
David Sterling, *Editorial*
Marilyn S. Greene, *Advertising*

ADVERTISING
David C. Cator, *Director*
Hamlin M. Gilbert, Jr.
Advertising Services Director
Lorraine Sakli, *Marketing Director*

NEW YORK 420 Lexington Avenue
Suite 1945, New York, NY 10170-0084
212-490-2510 ◆ fax: 212-986-4259

ATLANTA Brown & Company
770-998-2889 ◆ fax: 770-552-8250

CHICAGO Warden, Kelley, Allen & Opfer
312-575-1100 ◆ fax: 312-575-1107

DETROIT Heth & Associates Inc.
248-642-7273 ◆ fax: 248-642-1321

LOS ANGELES
Charles E. Schmuck & Associates
310-478-3833 ◆ fax: 310-478-1633

PHILADELPHIA
William H. Dixon Associates
610-696-2807 ◆ fax: 610-692-5177

SAN FRANCISCO
Charles E. Schmuck & Associates
415-986-1945 ◆ fax: 415-986-1159

TOKYO
International Communications Inc.
81-33-593-1441 ◆ fax: 81-33-580-0414

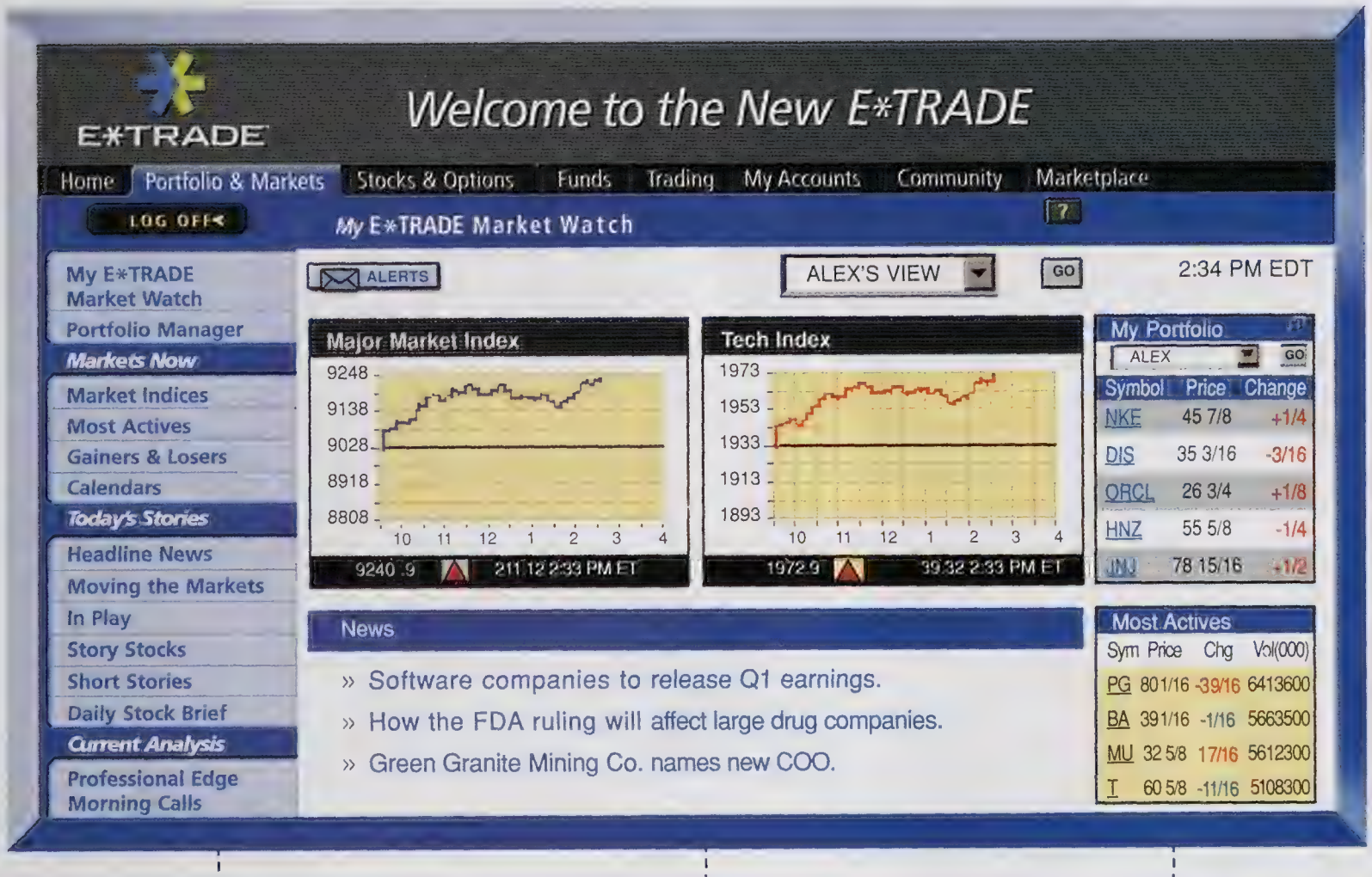
MEXICO
Towmar Representaciones Profesionales
525-395-5888 ◆ fax: 525-395-4985

FOUNDERS
S. Dillon Ripley
Edward K. Thompson

PUBLISHER EMERITUS
Joseph J. Bonsignore

The one-stop, stop-everything financial center.

Introducing the new E*TRADE. The Web's one-stop financial center. With 10x more research. More tools. More power.



All You Need to Invest

You can invest in stocks, options, and over 4,000 mutual funds. You also get cash management features like free checking, direct deposit, and competitive interest on uninvested funds.

Free Real-Time Quotes

Because old information is bad information. Also get breaking news. Charts. Analysis from leading sources. Morningstar research. Upgrades. Downgrades. All for free.

Still $14.95 a Trade†

E*TRADE not only gives you free tools to track and manage your money, but you can place trades around the clock—online or by phone—for as low as $14.95.

To sign up with the online broker rated #1, call 1 800 ETRADE-1 or visit our Web site.

www.etrade.com
aol keyword: etrade

E*TRADE®

Someday, we'll all invest *this* way.®

†Nasdaq, limit, and stop orders are $19.95. For listed orders over 5,000 shares, add 1¢/share to the entire order. Add $15 for broker-assisted trades. Orders executed during market hours. 10x more research than previous generation Web site. E*TRADE rated #1 online broker by Gomez Advisors' 3rd quarter report on brokers, issued 8/12/98. Gomez Advisors is a leading independent authority in online financial services. ©1998 E*TRADE Securities, Inc. Member NASD, SIPC.

SMITHSONIAN

PERSPECTIVES

Engaging a Child's Mind

AT THE SMITHSONIAN EARLY ENRICHMENT CENTER, THE MUSEUMS ARE A CLASSROOM FOR THE VERY YOUNG

READERS OF THIS COLUMN KNOW WELL THAT THE Smithsonian Institution has a host of programs that do not involve collections and exhibitions, yet amplify the Institution's mandate for the "increase and diffusion of knowledge." The Smithsonian Early Enrichment Center (SEEC) is one of which we are proud. It is a preschool program that provides children with the rich learning opportunities available in our museum settings.

SEEC, which originated in our desire to provide on-site day care largely for staff children, is celebrating its tenth anniversary this year. Today it has evolved into a model preschool run by its own board of directors, with facilities in the National Museum of American History, the National Museum of Natural History and the Arts & Industries Building. The program serves more than 125 children, ranging in age from 3 months to 6 years.

When SEEC was created, museums were not commonly viewed as learning environments for young children. Recognizing that the Smithsonian could provide more than just on-site child care, Director Sharon Shaffer took on the task of creating a national model for museum-based education for young children. To guide staff in this pioneering effort, a curriculum called "Museum Magic" was developed through a grant from the Clarke-Winchcole Foundation. From exposure to the objects in exhibitions, and from unique experiences in the art galleries, the gardens and, of course, the National Zoological Park, SEEC children learn fascinating concepts and develop an understanding of the world around them.

One concept SEEC children explore is communication (each month a different theme is featured), and they learn that symbols are forms of communication. At the National Museum of African Art the children might see an Adinkra cloth once worn by an Assante king that contains stamped and drawn symbols about that king. The children would then return to their classroom to create symbols about themselves out of sponges and other printmaking materials. Teachers lead children in a discussion of dance as a means to communicate while their charges view the ballet sculptures by Edgar Degas at the Hirshhorn Museum. The children dance and pose to imitate the sculptures. They next listen to different kinds of music and imagine which kind best matches the dancers' movement. A lighthouse in the maritime exhibition at American History launches a discussion of objects that communicate, including the significance of lighthouse design. Flashlights and rhythm sticks are used to demonstrate how light and sound from the lighthouse communicate to boats. The children then visit a Georges Seurat painting of a lighthouse at the National Gallery of Art to see how the artist used dots to communicate a quality of light. Such are the rich opportunities museums offer young children. A five-year study indicates that SEEC's program has had a significant impact on the cognitive development of its graduates.

Increasingly SEEC has shared its innovative approach beyond the National Mall, licensing its curriculum to a school (Beauvoir, the National Cathedral Elementary School in Washington, D.C.), a child-care program (at the U.S. Department of Justice) and a group of museums (University Circle Incorporated in Cleveland, Ohio). In 1995, the Walsall Museum and Art Gallery in England sent a research team to study SEEC's approach, and in return Shaffer participated in a museum conference in Walsall, sharing with other educators SEEC's perspectives.

Twice each year a seminar, "Learning Through Objects: Museums and Young Children," brings together groups of the country's early childhood educators and museum professionals for a demonstration of SEEC's specific strategies and techniques for the classroom and the museum. A new program funds seminar expenses for teachers working with lower-income families, so that new constituencies can benefit from SEEC resources.

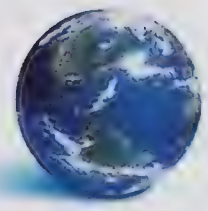
Today, a 10-year-old former SEEC student signs each of her paintings with a small ladybug or butterfly because of a memory etched in her mind from her visits to the Peacock Room at the Freer Gallery of Art. There she learned that the artist James McNeill Whistler signed his paintings with a small butterfly. Remarkably, this child was $2\frac{1}{2}$ years old when she made that discovery.

Museum professionals are only beginning to see the exciting learning opportunities for preschool children. SEEC is a success story in this new field.

I. MICHAEL HEYMAN, SECRETARY

Delta Air Lines

ON TOP OF THE WORLD™



Now available in extra small.

Your business grows. Your need to travel grows. And at Delta Air Lines, we're expanding our service to shrink the world accordingly. We're continuing to add destinations throughout Latin America and Asia, and we have more nonstops to more cities in Europe than any other airline. And if you happen to be going beyond Delta's destinations, you're still not going beyond our sphere, thanks to our Worldwide Partners' flights. In total, you'll have the option of more than 5100 daily flights to over 355 cities in 62 countries where you do business. Rest assured, as your need to travel the world continues to grow, at Delta Air Lines it is always our pleasure to reduce the lengths to which you have to go to get there.*

Call your Travel Agent or Delta Air Lines at 1-800-221-1212, or visit us at www.delta-air.com

*Based on cities served by Delta, Delta Connection® and Delta Worldwide Partners®. ©1998 Delta Air Lines, Inc.

LEONARDO'S HORSE

THE TELEPHONE OF THE LEONARDO da Vinci's Horse, Inc. (LdVHI) headquarters began ringing when SMITHSONIAN's September issue first reached your readers. It still hasn't stopped ringing. Although the gift of Leonardo's horse to the Italian people has always been the goal of the project since 1977, it has also been our intention to cast a second horse for display somewhere in the United States.

In 1996, two years after the death of Charles Dent, who founded LdVHI, a Michigan businessman named Frederik Meijer called me. He is the moving force behind the nonprofit Frederik Meijer Gardens, which is a 118-acre botanical and sculpture park in Grand Rapids, Michigan. Meijer's son Hank had read an article about Leonardo's horse in the *New York Times*, and the Meijers wanted to explore the possibility of casting a horse for the outdoor gardens.

Our negotiations eventually led to a second casting of Leonardo's 24-foot horse. The settings for the two statues will be different: the Milan horse will stand on a pedestal; the Frederik Meijer Gardens horse will be displayed at ground level.

Roger Enloe, President
Leonardo da Vinci's Horse, Inc.
Fogelsville, Pennsylvania

IT WAS WITH GREAT DELIGHT THAT I read Nancy Mohr's brief essay, with its accompanying pictures by Enrico Ferorelli, about the building and casting of sculptor Nina Akamu's interpretation of Leonardo's great charger.

Besides the second casting of Leonardo's horse that Frederik Meijer is bringing to the Midwest in October 1999, he has commissioned Akamu to cast an eight-foot bronze model of the horse. The latter will be housed inside a newly designed Renaissance Education Room at the Frederik Meijer Gardens.

Meijer has also acquired two original bronze pieces from Akamu that he will add to the gardens' collection of more than 70 outdoor sculptures. Akamu, by the way, was awarded the commission to create the centerpiece of the National Japanese American Memorial, which will be dedicated in Washington, D.C., sometime next fall.

Daniel E. Doane
Grand Rapids, Michigan

THE OBJECT AT HAND

I HAVE VERY FOND MEMORIES OF THE giant steam engine tractors that Diotima Booraem described in her column "Steaming into the Future." They were often called "road engines" in the Midwest when they were used to pull grain separators from farm to farm for communal threshing rings. In the 1930s, I used to help out on the farms of two uncles during the summers, mostly pitching bundles of wheat up onto wagons, which horses pulled to the threshers.

Once, a pitchfork was accidentally thrown into the thresher, causing it intestinal distress. As the smallest boy around, I was sent into the bowels of the machine to unclog it. While I was squirming around, I could hear the men making loud comments about starting up the machine to see whether I'd cleared the clog. The thought of the steel knives cutting me apart instead of the wheat bundles terrified me. When I emerged, unscathed, there was a lot of laughter but no praise for my heroism.

Robert O. Noyer
Winchester, Virginia

YOUR COLUMN TOOK ME BACK TO Ettrick, Wisconsin, and the summer of 1940. There I helped thresh oats with a Case Traction Engine. For a lad of 10, it was a thrill to sound the big-throated steam whistle. The long belt from the engine to the thresher seemed to spare the nerves of the hay-hauling horses and to prevent sparks from igniting the straw pack.

Frank Camp
Potomac, Maryland

DR. MINOR AND THE OED

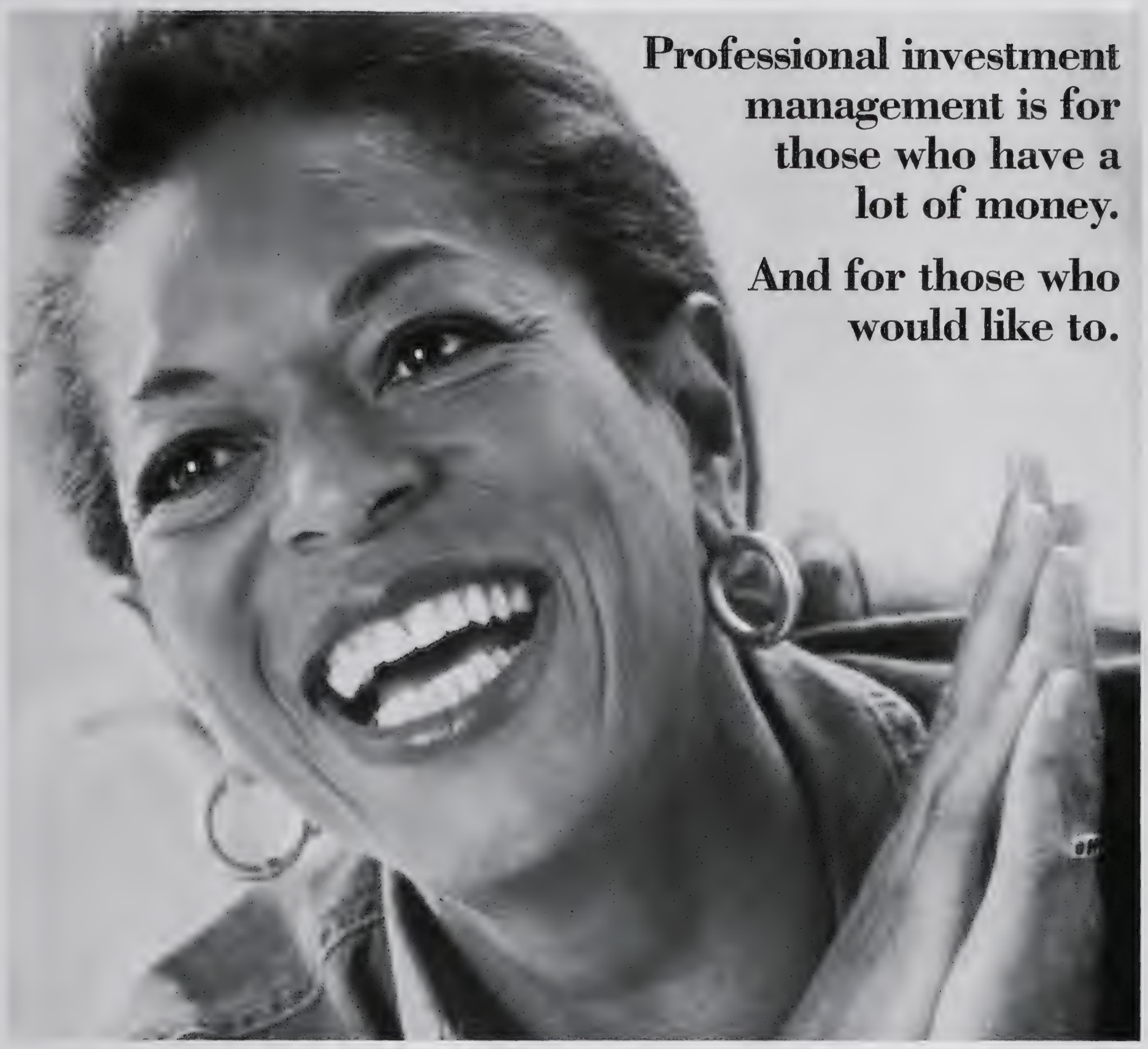
AS A TRANSCRIPT EDITOR FOR A COURT reporter, I have developed a love for the dictionary. I am also fascinated with the history of the English language, and whenever I read or hear an interesting word, I look it up to learn its root and meaning.

I thoroughly enjoyed Simon Winchester's article about James Murray, the editor of the *Oxford English Dictionary*, and Dr. William Christian Minor, the principal contributor to Murray's project.

Michele S. Cook
Boise, Idaho

YOUR ARTICLE MADE ME DISTINCTLY uneasy. It told the story of an American surgeon whom a British court committed to Crowthorne's Broadmoor Criminal Lunatic Asylum for having killed an Irishman in London in 1872. The author described Dr. Minor's murderous and self-mutilat-

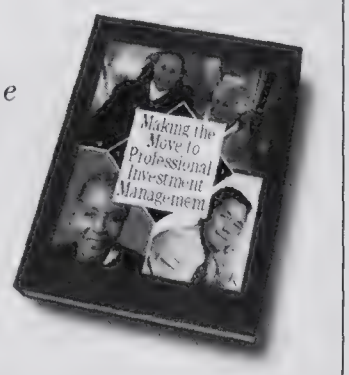
ENRICO FERORELLI



It could have happened a number of ways. You may have received an inheritance. Or your IRA may have matured. Or you may have discovered that the combined assets of you and your spouse add up to considerably more than you once realized. The point is, you suddenly find yourself with more money than you've ever had before. What better time to seek the services of an independent financial advisor? Guided by an in-depth understanding of your personal financial situation, and driven to work in partnershp with you, an independent fee-based advisor will construct an investment portfolio tailored to meet your financial objectives, and actively manage it on your behalf. To find an independent financial advisor you can trust and respect, ask your lawyer, accountant or close friends for a few recommendations. Having a lot of money isn't the only thing in the world—just one of the nicer things.

Whether you have $100,000 or several million dollars in investable assets, we invite you to call for our complimentary guide, ***Making the Move to Professional Investment Management.***

1-888-889-4997



©1998 Charles Schwab & Co., Inc. All rights reserved. Member SIPC/NYSE. (1198-3486)

This message is brought to you by Charles Schwab & Co., Inc. as part of our continuing effort to educate the investing public. Schwab provides custodial and trade execution services to more than 5,000 independent financial advisors.

ing madness as his "scandalous secret." Is it better for Dr. Minor to go down in history as a famous madman or as someone who managed to suppress his insanity enough to make a vital, scholarly contribution?

Upon reading Winchester's passage about Dr. Minor's incarceration at Broadmoor ("And there he would have rotted away for the remainder of a lifetime . . . " except that he came across "a slip of paper tucked into a book," soliciting volunteers to help with "the biggest expository collection of English words that had ever been created in the history of the English language") I just broke down in tears.

Dennis Griesser
Buena Park, California

I AM A NEW YORK PLAYWRIGHT, AND in 1995 I completed a full-length drama called *The Dictionary*, which focuses on Dr. James Murray and Dr. William C. Minor. Simon Winchester sought my help when he was first considering writing his recently published book *The Professor and the Madman*, and he mentioned me in the book's acknowledgments.

Based on my research, I do not agree with Winchester's theory that Minor's clinically paranoid dread of the Irish, the Fenians in particular, was necessarily the result of his experience as a surgeon with the Union Army during the Civil War.

I uncovered what I believe may be the reason that Minor feared the Irish. While he was stationed on Governor's Island in New York in 1867 and 1868, the Fenians were, in fact, his real enemy.

In 1866, the Fenians had staged an assault on Canada from New York State. About 800 Irishmen crossed the Niagara River and captured Fort Erie. U.S. troops subsequently defeated them, and about 700 Fenians were arrested. Minor most likely would have known this. The local papers frequently covered events pertaining to the revolutionary movement in Ireland and to activities of the Irish who were living in New York.

In March 1867, the Irish cause held the front page of just about every New York newspaper. During the week of March 18, 1867, there was the expectation of a Fenian attack on Canada. Three newspapers reported the story. News of U.S. troops being moved from New York to the border to thwart the offensive also made headlines. It was very likely that Minor would have been sent to assist in the battlefield action against the Fenians. In the end, the 1867 attack never took place.

Mitchell Redman
New York, New York

DELACROIX

MY HUSBAND WENT TO FRANCE while he was in high school and saw Eugène Delacroix's famous *Liberty Leading the People*. It is still one of his favorite paintings.

When he and I were in France, we visited the Louvre Museum, specifically to see that painting, which Helen Dudar described in your September issue as one of Delacroix's landmark early pieces. My husband was sadly disappointed. The museum was refurbishing that gallery, thus he was unable to introduce me to the painting in its full size and splendor.

After a week in Paris, on one of those days when I felt I needed a little liberation, I made him a pen-and-ink drawing [below].

With the exception of switching to a vertical format, I attempted to maintain much of the same layout of the central figures in Delacroix's work.

Merana Cadorette
Kissimmee, Florida

HARRIS TWEED

MY WIFE AND I ENJOYED THE ARTICLE by Joseph Harriss on Harris Tweed, and we were amused by his description of his 1970s Harris Tweed overcoat that he had worn for more than 25 years until his wife gave it away. He surmised "that there's another unfashionable guy out there still getting good wear from that coat." He is probably right. In 1958, I bought a Harris Tweed overcoat, which was the first major purchase that my wife and I had made since getting married. I don't remember the cost, but it was expensive at the time, and I wore it until the early 1980s, when I passed it on to our son. He has made some minor alterations to "modernize" it, but he insists that it is his favorite winter coat and says I can't have it back.

Harold M. McLeod, Jr.
Greensboro, North Carolina

AFTER I HAD FINISHED YOUR article ON Harris Tweed, I picked up the book I have been reading, *The Complete Sherlock Holmes*, and found a reference to it. In "A Case of Identity," Dr. Watson reads an advertisement in a

With six months of darkness annually, Norwegians have learned a thing or two about nightlife.

©1998 NORWEGIAN CRUISE LINE SHIPS' REGISTRY: BAHAMAS AND PANAMA

THE NORWEGIAN WAY

To Norwegians, boredom is not an option. But just about everything else is. Like Theme Cruises (we launched them). Broadway Shows (we debuted them). And celebrated entertainers (we feature them). As a matter of fact, before we book a single musician, singer, dancer or comedian, we audition hundreds of acts, review thousands of tunes and listen to millions of jokes. That's why our nights are always so much fun. No matter how long they last. It's showtime! For immediate seating, see your travel agent. Or call us for a free brochure.

1-800-327-7030 *www.ncl.com*

NCL NORWEGIAN CRUISE LINE

newspaper that describes a missing man named Hosmer Angel. When he was last seen, the ad said, Hosmer was dressed in "black frock-coat faced with silk, black waistcoat, gold Albert chain, and gray Harris tweed trousers, with brown gaiters over elastic-sided boots."

Dennis Huya
Albion, Pennsylvania

HARRIS TWEED IS ONE OF LIFE'S GREAT pleasures—it has been so for me since the second grade. In this world of hybrid gimmicks, it is magnificently unique. If I may presume to suggest a possible inaccuracy in your article, however. You stated that Harris Tweed's orb-and-Maltese-Cross trademark is "the oldest British trademark in continuous use, dating from 1911." While I certainly can stand to be corrected, I believe that the red triangle of Bass Ale was the first recorded British trademark, dating from 1876 and in continuous use since then.

Bass Ale is another of life's pleasures, although it has been pleasing me since long after the second grade.

James Patrick Casey
Santa Rosa, California

Mr. Casey stands correct. Ed.

ICE STATION SHEBA

YOU MISSPELLED THE NAME OF OTTO Sverdrup in your article about Ice Station SHEBA. He was an Arctic explorer who was one of five men traveling with the Norwegian polar explorer Fridtjof Nansen across the Greenland ice pack in 1888. Not only was Sverdrup captain of the *Fram* during Nansen's 1893-96 voyage from Norway to the New Siberian Islands, he was the leader of the second *Fram* expedition to Ellesmere Island from 1898 to 1902. The Sverdrup Islands that lie west of Ellesmere Island are named for him. It was Sverdrup who sought to preserve the *Fram* as a historic monument.

Finn Nielsen
Winter Park, Florida

I RECOGNIZE THAT CONDUCTING SCIentific research in remote areas can be difficult, but the hazardous laboratory practice that was pictured on page 42 demands comment. I hope that the pipetting-by-mouth that chemist Harold Welch demonstrated in the "Blue Bio" laboratory was not an example of routine lab practice. I was taught, and learned by error 32 years ago (when I spit out the sodium hydroxide solution that I had mouth-pipetted, it turned my lab notebook pink) that it was not safe.

Hunter Daughtrey
Durham, North Carolina

THAILAND'S ELEPHANTS

I COMMEND ANTHONY MECIR AND Michael Freeman for their coverage of the endangered elephants of Thailand. The pictures on page 55 showing an abused worker elephant broke my heart. The so-called humans who work these elephants to death are a disgrace to society.

Where can I send a donation to help the Elephant Hospital?

Michele Ferhetich
Cherry Hill, New Jersey

Donations can be sent to: Friends of the Asian Elephant, 36/15 Moo 2 Ram-Indra Road (K.M.4), Anusawaree, Bangkhen, Bangkok 10220 Thailand. Ed.

SMITHSONIAN PERSPECTIVES

I READ SECRETARY I. MICHAEL HEYman's column "Why Save the Flag?" with great interest, and I agree with him about the importance of the preservation of historic objects.

Not included in the column were several known historical facts. Just before the British were to attack Baltimore by land and sea, Francis Scott Key and two other U.S. citizens were being held on board a British warship at the mouth of the Patapsco River, about five miles from Fort McHenry. Key and Col. John Skinner had gone out to the British fleet on September 12, 1814, to obtain the release of Dr. William Beanes. The British bombardment of Fort McHenry began at 6 o'clock the morning of September 13, and lasted for more than 24 hours [SMITHSONIAN, *Around the Mall and Beyond*, October 1998].

By dawn's early light on the 14th, when Key saw that our flag was still there and was inspired to write *The Star-Spangled Banner*, the British fleet commander, Admiral Cochrane, concluded that the attacks had failed. He ordered that the prisoners be released and withdrew the fleet.

John Evans
Rancho Palos Verdes, California

1849 CALIFORNIA GOLD RUSH

THE CAPTION FOR THE PHOTOGRAPH on page 16 of your July 1998 *Object at Hand* column gave an incorrect date. I recently saw a nearly identical print in the Alberta Provincial Archives in Edmonton. The picture was taken at Edmonton in 1890 by Charles Mathers, who was one of the early pioneers of photography in western Canada in the late 19th century.

The caption should have described the miner as washing gold with a grizzly (which is a metal grating that screens off large stones while allowing finer material to fall into the sluice).

Pat Kariel
Calgary, Alberta, Canada

WRITE TO SMITHSONIAN

Letters for consideration in this column must include your full name, daytime telephone number, and street address. Letters may be edited for clarity and length. Send mail concerning the current issue to: SMITHSONIAN Letters Editor, P.O. Box 44400, Washington, DC 20026-4400, or to LettersEd@simag.si.edu. Send all other queries and comments to SMITHSONIAN, 900 Jefferson Drive, SW, Washington, DC 20560-0406.

This time we're not only protecting a forest,
we're preserving its spirit.

Port Hudson
Civil War Battle Site
Longest siege in American military history
Last Confederate stronghold on the Mississippi River
25,000 soldiers died over a three-month period
First black soldiers in Union Army to

"As a forest products company, we've always been committed to protecting lands that harbor special trees, plants and animals for future generations. At Port Hudson, we're protecting something equally important. Our nation's heritage."

Ronnie Albritton. Environmental Engineer. Civil War Buff

Georgia-Pacific

It's what we do differently that makes us better.

AROUND THE MALL & BEYOND

Movie Magic on the Mall

MUSEUM FLICKS—FROM GERMAN SILENTS TO A COMEDY STARRING KANGAROOS—ARE NOT THE TYPICAL FARE

BY MICHAEL KERNAN

IN THIS ERA OF THE $7 MOVIE, WASHINGTON HARbors a great secret: there are all sorts of free films showing day and night on the Mall.

At the Hirshhorn, Kelly Gordon screens up to 400 pictures a year to bring us important new art-house films from all over the world. At the Freer, Michael Wilpers has found rare treasures in the Asian cinema, especially works from mainland China, and more recently, Iran. And at the National Gallery of Art, which is not a Smithsonian museum but is definitely a presence on the Mall, Peggy Parsons regularly packs the 470-seat state-of-the-art theater, selecting the kinds of movies that attract long lines of fans.

Of course, just about every museum worthy of the name features some sort of film program, mostly documentaries connected with the exhibitions, or regular commercial releases that you pay to see, such as the spectacular IMAX productions at the National Air and Space Museum. But the freebies are something else.

"We screen works in progress," Gordon tells me. "We'll look at anything anyone sends us. In November we're showing *B Movie*, a work in progress by our projectionist, Edgar Davis, who happens to teach film at Howard University."

Gordon goes to film festivals all over the world, from Rotterdam to Jerusalem. She attends Sundance (the festival popularized by Robert Redford) and Slamdance, its offshoot, where she got a number of the films shown at the Hirshhorn this year. Then there are the Italian festivals at Taormina (in Sicily) and Florence, Spain's San Sebastian, and Canada's Toronto festival. She accepts about 10 percent of the work she sees.

Nearly one out of three of the films she screens are premieres for the Washington area or even the nation. Director Chantal Akerman's sometimes difficult films are featured here, as are works by Cindy Sherman and Matthew Barney, artists who have made forays into filmmaking.

"What surprises me most is how diverse our audience is," says Gordon. "We get people from the art community, from the diplomatic community, or people who simply want something different. We call attention to the art and craft of it, and what it takes to complete a film. We had one director come in with a script for a work in progress and rehearse scenes with the actors. He returned a year and a half later to show the finished film."

Many a struggling young filmmaker has been helped by the Hirshhorn program, notably those from Film Crash, a New York art-performance group that first showed its student shorts, then graduated to feature films.

"What they earn at our screenings may help them complete a sound track or help pay for lab work," Gordon says. "It's good to feel we have a hand in what's happening out there right now in film."

The museum doesn't do retrospectives or theme pro-

Eighteen Springs (1997), a romance set in 1930s Shanghai, was part of the Freer Gallery's Hong Kong film festival this year .

Wealth's greatest reward is the ability to share your achievements with people you cherish. That's why, as you and your family come to rely more than ever on your portfolio, you're drawn to those investments of only the highest quality and potential.

A time for living, a time for growth.

Stock and bond investments that add quality and diversity to your portfolio

For a century, we at John Nuveen and Company have focused on the needs of investors seeking comfortable, dependable financial solutions. Today, over 1.3 million investors entrust their assets to us through our expanded array of long-term, growth-oriented equity funds and other quality investments. Along with our carefully chosen Premier Advisers[SM] we employ a disciplined fund management approach that seeks attractive returns with moderated risk.

Talk with your financial adviser today about Nuveen investments, or contact us at **800-782-6308, ext. 103** or *www.nuveen.com.*

1898 1998

NUVEEN

OUR SECOND CENTURY

helping investors sustain the wealth of a lifetime.[SM]

For a prospectus containing more complete information, including charges and expenses, call your investment adviser or Nuveen. Read it carefully before you invest. ©1998 John Nuveen & Co. Incorporated.

grams; the yardstick, says Gordon, is "what we exhibit at the museum," which would seem to guarantee an understanding audience. Derek Jarman's *Blue*, however, which consists of 70 minutes of a blank blue screen accompanied by a voice-over, drove some audiences up the wall.

"In Art Night on the Mall, when we're open till 8, the guards tend to direct people to the screenings, and so we do get some unsuspecting viewers," admits Gordon. "But it's free, so there's not much complaint." Indeed, viewers often want to hang around afterward for extended discussion.

Over at the Freer Gallery of Art, Michael Wilpers gets many of his movies from large art-film distributors like New Yorker Films and Kino International, from smaller distributors who specialize in Hong Kong, Arab or Asian-American films, or from archives or organizations that assemble, restore and tour a collection of films from a particular country or director. "When Cinematheque Ontario and the Japan Foundation toured films by Japanese directors Kenji Mizoguchi and Shohei Imamura," says Wilpers, "we copresented the two major retrospectives with the National Gallery of Art."

"They're thoughtful; the plot is slow-moving, few characters, and you get drawn in. There's no interest in special effects."

Wilpers has been showing a lot of Iranian films. They fill the 300-seat auditorium to bursting, he says. He likes them because "they're thoughtful; the plot is slow-moving, few characters, and you get drawn in; you care. There's no interest in special effects; it's about real life."

Not surprisingly, there is a certain amount of state interference. In Iran, for instance, even though a scene may show a married couple in their own house, because the actors are not married to each other in real life or to members of the same family, the woman playing the wife has to wear her chador headpiece.

"I'm told this is true even in bed scenes," he chuckles, "because the audience is seen as a bunch of strangers invading that household. It's completely unrealistic. But the actors, who are often amateurs, are very natural; this lends a kind of realism that makes these films engaging."

In conjunction with the Freer and Sackler galleries, the National Museum of African Art is presenting the series "Great African Films of the 90s" through mid-December. "The films are divided into categories that represent a broad spectrum of the human experience," says museum fellow Aboubakar Sanogo, who organized the program. Works focusing on women's issues include the comedy *Taafe Fanga*, an adaptation of a myth in which women seize power and invert gender roles. Political themes are explored in such selections as *Le Damier*, a film about a president-for-life who turns to the game of checkers to ward off boredom, and the complications that ensue when he summons a checkers champion from the slums to compete against him. Several directors will be on hand to discuss their films.

At the National Gallery, where the audience is famous for its contentious outspokenness, free movies have been showing since 1982. Many accompany the current exhibitions—for example, the documentary that was shown with the recent Alexander Calder show at the East Building.

But for me the real appeal of the movie program at the National Gallery is the overall presentation of film itself as art. Just for starters, look at these offerings from recent years:

The Golden Age of Mexican Cinema, 1933 to 1949. Films from Greece that are reworkings of ancient myths. A Century of French Cinema. The Filmmaker's Venice. The films of Michelangelo Antonioni, Vittorio De Sica, Werner Herzog, Jack Clayton. Venezuelan film. Hungarian cinema. The great musicals. German silents. The films of Paul Robeson.

For newcomers to the movies it is an education; for lifelong film fans it is a veritable feast.

Video artists, both the famous and the relatively unknown, also show their work here and discuss it.

"We try to mix the old and the new," says Peggy Parsons, who heads the film program at the gallery. "In our first year we did Roberto Rossellini, and we had all the extant prints of his work. Isabella Rossellini [his daughter] came in for a screening of *The Messiah*, his last film. She had arranged for us to get the family print of the picture. She wasn't a big star yet, but she hopped up on stage in her jeans and gave a nice tribute to her father."

The audience loved it. The gallery encourages dialogue with the speakers, even though the scholars who come on using too much film jargon are apt to be given a hard time. Education in film awareness is, after all, the main focus of the programs.

In my years of attending free films on the Mall, I have noticed (and become part of, I suppose) a permanent floating audience that fills the seats to see the darndest things. I have gone early to see some obscure picture and found the doors still closed and the line extending 100 yards down the corridor.

Kelly Gordon tells me about the movie *Kangaroos: Faces in the Mob*—two hours with no dialogue, nothing but kangaroos, whom you got to know. She thought it was hilarious and felt that other people would like it, too. But when she first showed it, the audience sat in deadpan silence. "I feared I had made a mistake," Gordon divulges. "But the next night, the audience rolled in the aisles.

"There's just no telling," she says.

The Face *of* Innovation

Capturing a Revolution in Progress

© 1998 Yahoo! Inc.

Remember: Sometimes it takes "two" days to become a millionaire.

Why did "SmartMoney Magazine" rank us as one of their top sites for investors? Pop an ice cold soda and go see for yourself. It's free at www.yahoo.com

Yahoo! Stocks & Finance

DO YOU YAHOO!?

The Face of Innovation

A Letter from Dr. Spencer Crew
Director, The National Museum of American History

Change can be invigorating; it can also be unsettling. In a time of rapidly accelerating change, it is increasingly a challenge for us at the National Museum of American History to accomplish our Smithsonian mission, to "increase and diffuse knowledge" about how society changed and evolved in our times. To ensure that the museum is able to master the challenges that our rapidly changing future presents, we have initiated a capital capaign for the 21st century to allow us to employ the newest technologies for preservation and exhibition; keep our exhibits current and vital; and continue to collect and preserve important artifacts and knowledge of our time.

We are extremely fortunate that, over a decade ago, Patrick J. McGovern, founder of International Data Group, had the foresight to invite a group of information technology leaders to help us recognize and document how individuals are using new information age tools to create positive change. You will meet a few of these exceptional individuals on the following pages, and, you may meet all 2,648 of them by visiting our web site at http://innovate.si.edu.

We are immensely grateful to these Computerworld Smithsonian Laureates for taking up new tools to craft a better future for us all. Because the case studies of their work now reside in our Museum's Permanent Research Collection, citizens from around the world who share the ambition to create positive change are now building on their ideas to amplify and extend the benefits of technology. Through this exceptional public-private partnership, we at the National Museum of American History are able to record history almost as it happens, while we continue to stimulate the very spirit of innovation and creativity that improves the world in which we live.

On behalf of the Museum's Board and staff, we look forward to many more decades of collaboration on this important program, and to many more chapters in this unique partnership. More than anything else, visitors to our Museum learn that history is a record of change, and that through understanding the process of change, individuals can exercise their influence on the course of history.

Scott McNealy, Co-founder and CEO of Sun Microsystems, pictured here with his son, is the recipient of the 1998 Ernst & Young Leadership Award for Global Integration.

Knowledge Network

Scott McNealy's competitive spirit is deeply rooted in his love of sports. He fondly remembers the coaches who pushed him to excel and be a responsible team member. His mission today is to have every man, woman and child on earth connected to a high speed, broadband network. He is determined to ensure that "...everybody will stand on the knowledge and capabilities of everybody else on the network."

Early Scoop on Learning

The media enjoy an excellent reputation at Brooklyn's Public School 41, where making news is helping inner city students exceed expectations. Panasonic's commitment to provide 200 elementary and junior high schools with complete state-of-the-art video production studios has created an enthusiasm for learning in the classroom that makes students compete to participate in classes, and made Jeff Goldstein and his P.S. 41 students the recipients of a 1998 Computerworld Smithsonian Award for Education.

WHY CAN'T THE HIGH-END COME DOWN TO YOU?

Tektronix® color printers have been the choice of the most discerning graphic artists, scientists, and designers for over fifteen years. Now we're bringing that same quality to the office, with a line of business printers that includes the first $1,995* network-ready color laser. It's everything you want in a printer. Performance. True 1200dpi. And a price that means you can finally afford to see color at work.

For a test-drive, call 1-800-835-6100, ext. 5-1553 or visit www.coloratwork.com

Tektronix®

*Estimated U.S. selling price; reseller price may vary. ©1998 Tektronix, Inc. Tektronix and Phaser are registered trademarks of Tektronix, Inc.

NEW MODELS

I hear and I forget. I see and I understand. I do and I remember. - **Chinese proverb**

For centuries, lecturers in medical school classrooms communicated primarily through the spoken word. Now, computers are turning those words into images that doctors can see, and simulations that they can actually practice on. The gains are immense. And for those of us who, because of disabilities, have trouble seeing or doing what others see and do, these same computers are giving us more control over our lives.

Brain

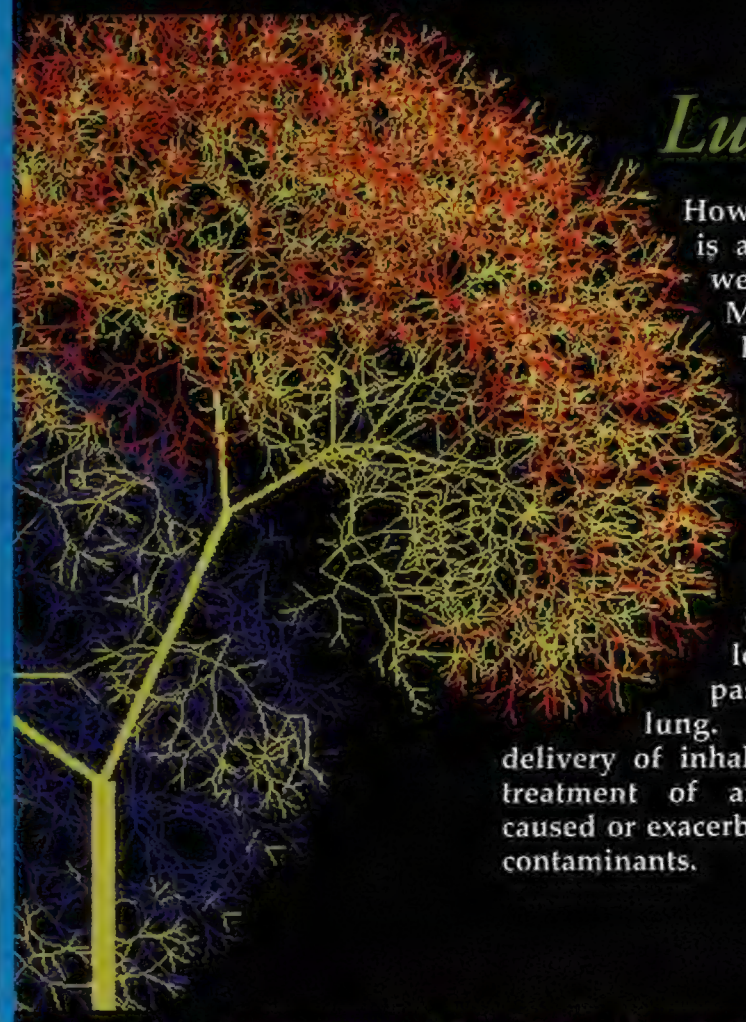
When Peter Larsen was shot through the center of his brain he was listed as comatose. But when his wife looked into his eyes she knew instinctively that his brain was still active, he was just trapped in an unresponsive body. It took LC technologies to enable a computer to gaze into Peter's eyes to reconnect him to the world. Just as re-nowned physicist Stephen Hawking uses a finger-driven cursor to communicate, this computer translates eye movements into cursor movements allowing Larsen to communicate with his wife. Soon we will have technology to help those who can neither move an eye nor lift a finger.

1998, University of Utah,
Visualization of an epileptic seizure

Heart

"One of the most scientifically exciting moments of my life," Ray Winslow of Johns Hopkins remembers, "was when I first viewed the simulation results of our very first large-scale cardiac heart model." To Winslow it illustrates the mystery, and the power, of computing--enabling us see and understand how nature works at a level of detail and beauty that had never been seen before.

1998, University of Utah,
Flow of Electrical Current from the Heart



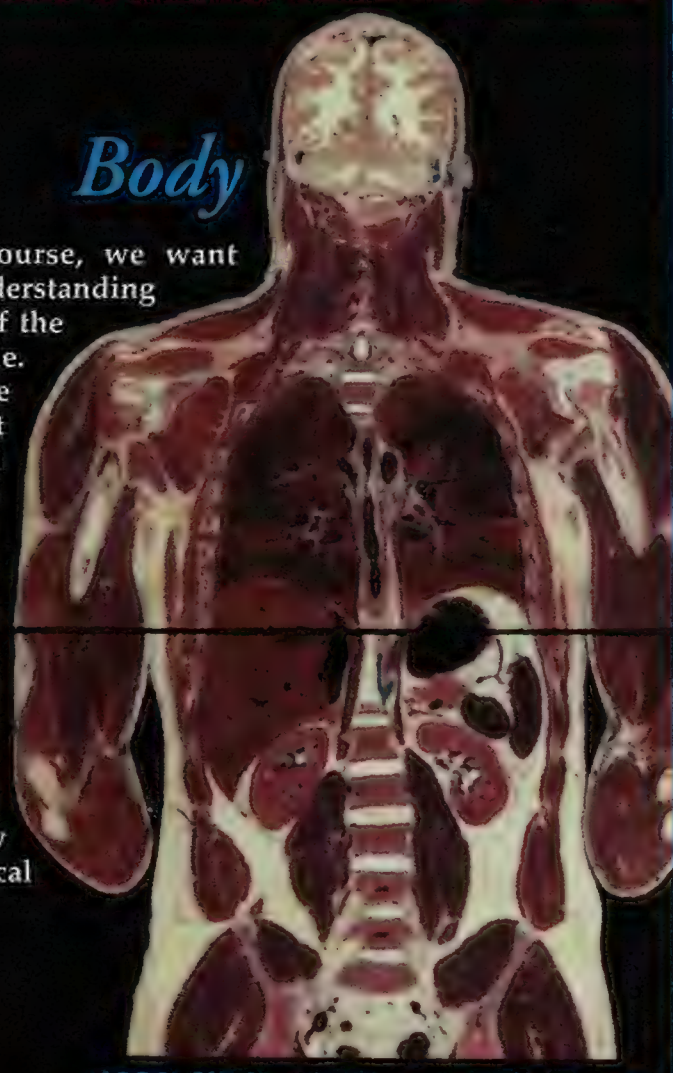
Lungs

How we breathe is affected by what we breathe. Dr. Ted Martonen of the EPA's National Health and Environmental Effects Research Laboratory is tracking the way pollution particles travel through, and lodge in, the passages of the lung. Models target delivery of inhaled drugs in the treatment of air-way diseases caused or exacerbated by airborne contaminants.

1998, U.S. Environmental Protection Agency,
Supercomputer Simulations of the Human Lung

Body

Ultimately, of course, we want to deepen our understanding of the wonders of the body as a whole. The Visible Human Project at the National Library of Medicine is a major step forward in this quest, providing a detailed image of the body, in three dimensions, which allows learning to open a new chapter of medical breakthroughs.



1996, National Library of Medicine,
Visible Human Project

Cray, Founder of Cray Research, recipient of the 1994 MCI Leadership Award for Innovation, is widely recognized as the father of supercomputing.

New Sources of Information Are New Sources of Innovation: You Are Never Too Young or Too Old To Reach Out To Them

In the Information Age, we all have the opportunity to connect to totally new sources of information. Like Bill Gates, we are never too young. Like Seymour Cray, we are never too old.

When Bill Gates was in 7th grade, Seymour Cray was already a legend in the computer industry. The father of the supercomputer, he would go on to found Cray Research and Cray Computer. But by the late 1980s, he too came to believe that the computer industry was on the wrong track. Shouldn't future computer architecture be modeled more on biology, he asked.

Information about biology was as scarce in a computer company as information about computers was in Gates' middle school. But when Gates couldn't find the information he wanted about computers and business, he developed his own sources.

Cray also had to develop his own sources. To his delight, he found what he needed on an obscure new source called the Internet, where he was welcome to listen and learn as biologists were sharing their ideas.

Shortly before his tragic death, Cray discussed his experiences and hopes for the unconventional in a Smithsonian Monticello Memoir Lecture. Like Gates' 7th grade classmates, Seymour's colleagues in computer architecture agreed his ideas were way off base. To the young University of Virginia students in his audience Cray's ideas made perfect sense. Bill Gates now leads the worlds largest company and Cray's colleagues are seriously focused on biology as a metaphor for business.

Gates, Chairman and Co-founder of Microsoft Corporation, recipient of the 1993 Price Waterhouse Leadership Award for Lifetime Achievement, is one of the most influential figures in the PC and software industry.

Breakthrough Science

Dr. Frederick Hausheer
Founder, Chairman and Chief Executive Officer, BioNumerick Pharmaceuticals, Inc.

I've taken care of a lot of patients. I've seen a lot of people die. That's what drives me." Dr. Frederick Hausheer's determination to build better links from the laboratory bench to the patient's bedside goes back to his early years in Independence Missouri. His father was a doctor; however, it was his grandfather's death from cancer that focused his later interest in research.

Today, he heads BioNumerick, a pioneering firm that uses computers to design cancer therapies. Although the work is theoretical and highly research-oriented, Dr. Hausheer continues to maintain close links to patients. He believes that success in the fight against cancer requires a close link between the bench and the bedside.

Hausheer, top right, **recipient of the 1997 Silicon Graphics/Cray Research Award for Breakthrough Science, is harnessing the power of supercomputers to discover new drugs to fight cancer.**

Relationship Revolution

When Technology Solutions Company recognized Scott Eckert of Dell Computer as a 21st Century Pioneer, they underscored the power information technology can have on relationships. Eckert's assignment from his chairman, Michael Dell, was simple. . . Use the web to improve the way we respond to our customers. Eckert's solution -- let the customer design the computer on-line before we build it, deliver it in record time and provide impeccable service --is definitely working. . . and, because they design it themselves... requests for help are on a steep decline.

Eckert, Director of Dell Online, is the recipient of the 1998 Technology Solutions Company 21st Century Pioneer Award.

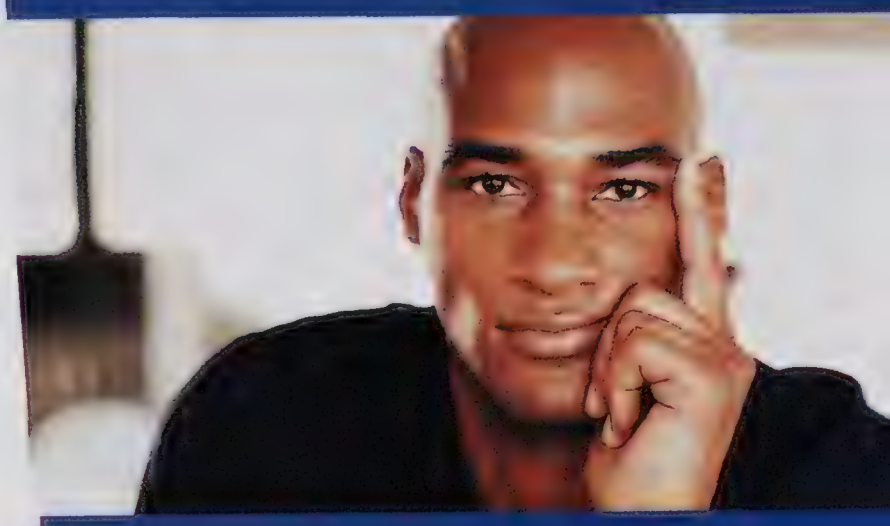
42" (diagonal) Flat TV

The Philips Display Collection

The question is no longer what to watch, but what to watch it on. Philips Flat TV is so thin, you can hang it anywhere.* The 32"

Fellini LCD projector

Recently, I bought my first piece of modern art. I can't take my eyes off it.



SVGA TV with CrystalClear II technology creates an amazingly sharp picture, and the Fellini LCD projector's high resolution capabilities are as close as you can get to true multimedia home theater. And if you want to go beyond movies, WebTV® Plus with new WebPIP™ allows you to watch TV and be connected to the Web simultaneously.

I've got to admit it's getting better.

www.PhilipsUSA.com

WebTV Plus

32" (diagonal) SVGA TV

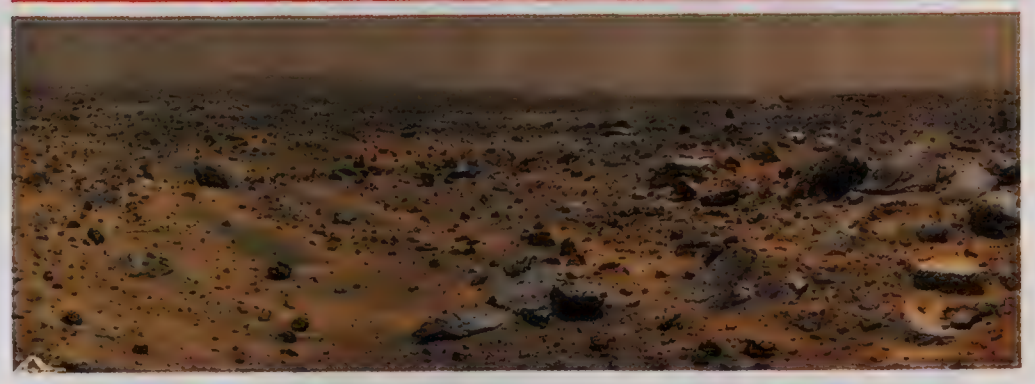
*Tuner housed in separate unit. All on-screen images are simulated. WebTV and WebPIP are either trademarks or registered trademarks of WebTV Networks, Inc.

©1998 Philips Electronics North America Corp.

PHILIPS

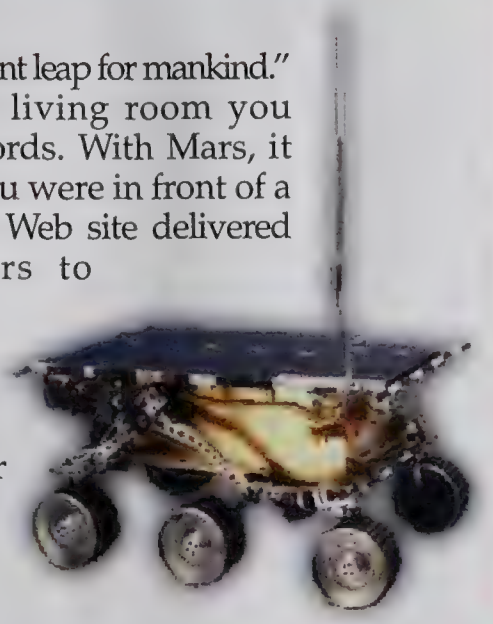
Let's make things better.

Outreach



On Mars

"That's one small step for a man, one giant leap for mankind." You no doubt remember whose living room you were in when you heard those words. With Mars, it has been different. Chances are, you were in front of a web browser. The Mars Pathfinder Web site delivered near real-time images of Mars to home computers around the world 500 million times the first month. Disseminating history as it happened, it was at the time, the largest such movement of infor mation in history.



Intergalactics

One of the most compelling questions of our time is whether or not we are alone in the universe. If Carl Sagan was right, intelligent life is out there, trying to reach us. It, therefore, behooves us to listen. If radio emissions are arriving from nearby galaxies, Stuart Bowyer of SETI, the Search for Extraterrestrial Intelligence, will hear them, and when he does, you'll be the first to know.

Ivan Sutherland and Dave Evans, co-founders of Evans & Sutherland and pioneers of visualization techniques, received the 1996 Price Waterhouse Leadership Award for Lifetime Achievement.

Seeing is Believing

Ivan Sutherland and David Evans

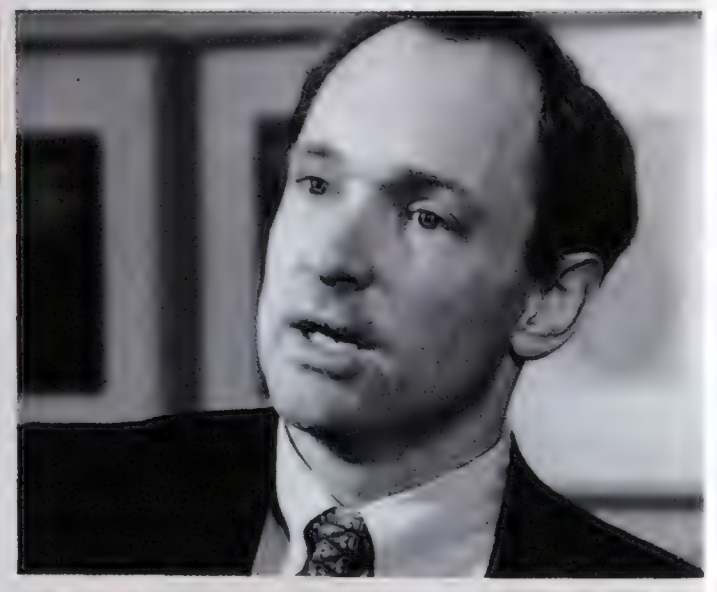
A Picture is Worth a Thousand Breakthroughs

Three decades ago, when David Evans and Ivan Sutherland began working on computers, few had screens, and "computer graphics" was an oxymoron. The revolutionary techniques they developed now allow computerized visualization and modeling that is used to predict product design behavior. Without these breakthroughs in visualization, mass computer usage would not have become a popular phenomenon.

Knowledge Dissemination

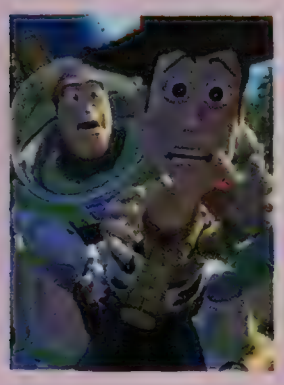
Tim Berners-Lee

Tim Berners-Lee grew up with machines, in an environment where innovation was in the air. "Our house was full of five-hole paper tape and mathematics," recalls Mr. Berners-Lee of his childhood in England. His parents, both mathematicians, helped develop the Mach-1, one of the first computers to be marketed commercially. As a boy, Mr. Berners-Lee devised mechanisms to remotely-control toy trains; he built a computer using a calculator keyboard rescued from the trash and rigged an intercom to link his bedroom to the attic and the kitchen. Years later, he developed the first Web server and the first client-side application, a wysiwyg hypertext browser/editor.



Berners-Lee, Director of WC3 and recipient of the 1997 MCI Leadership Award for Innovation, is widely recognized as the father of the World Wide Web.

The Emancipation of Education



Art

Computer animation created the highly-acclaimed animated movie, *Toy Story*. Establishing a new creative platform for future movie makers.

Bologna

Soon you will be able to stroll through the virtual city of Bologna, today, a thousand years ago, or any date in time.

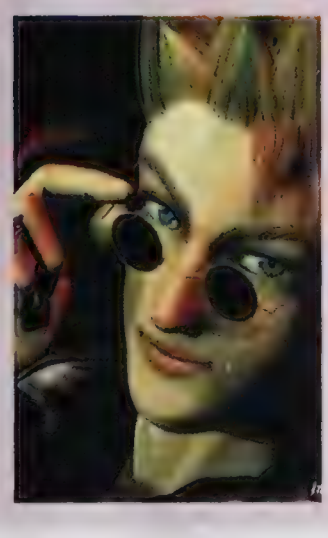
Seymour Papert
LEGO Professor of Educational Research, Massachusetts Institute of Technology

"Every maker of video games knows something that the makers of curriculum don't seem to understand. You'll never see a video game advertised as being easy. Kids who do not like school will tell you it's not because it is too hard. It's because it's--*boring.*"

Papert, received the 1997 NEC Leadership Award for Education, for his pioneering research on child-computer interaction.

Blake

When William Blake wrote his *Songs of Innocence*, he meant for them to be read in the presence of elaborate illustrations, but the images were too expensive to print. Now, CD-ROM technology is making Blake's creativity whole again.



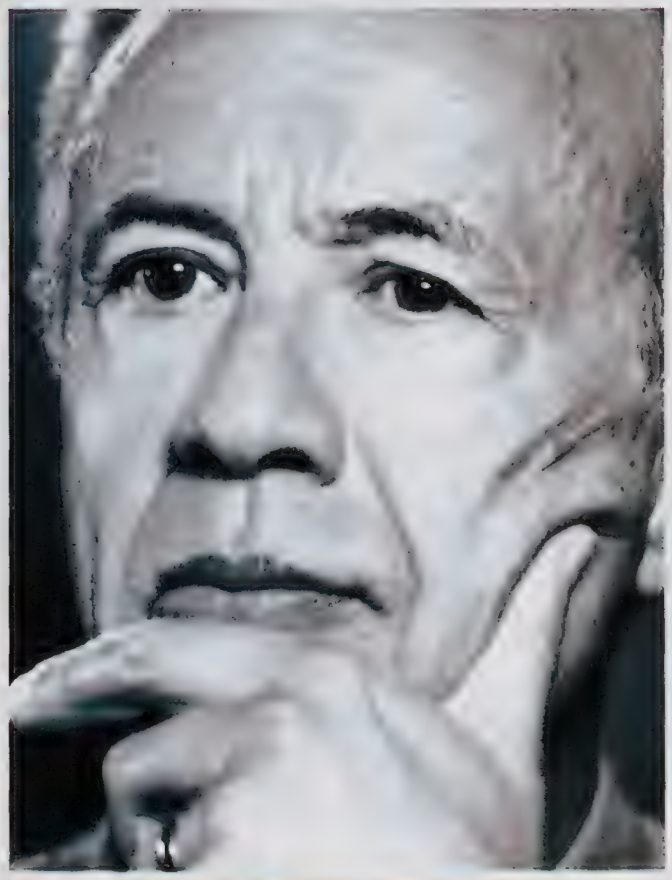
Future

Virtua Fighter®, from Sega Enterprises, is more than just a great game. It is a window into what all computing will look like in the years to come: vivid, immersive, three-dimensional, and able to respond to the user in a smooth and life-like way.

Revolutionary Progress

Andrew Grove's path though life has often crossed uncharted waters. Born in Budapest in 1936, he survived the Nazi occupation and fled Hungary during the 1956 Communist invasion, arriving in New York City with little more than a head full of dreams.

At City College, Dr. Grove so excelled in his studies in chemical engineering that his teachers encouraged him to pursue an academic career. After earning a Ph.D from the University of California at Berkeley, Dr. Grove took a risk and joined a maverick startup known as Fairchild Semiconductor. Not long after, Gordon Moore–Dr. Grove's colleague at Fairchild--shared with him plans for a new company. Before Moore finished speaking, Dr. Grove had volunteered, and Intel was born.



Grove, recipient of the 1997 Price Waterhouse Leadership Award for Lifetime Achievement, is one of the driving forces behind the evolution of the microprocessor.

Trends Indicate
The Best is Yet to Come

by James Bailey

Taken individually, innovations in the field of Information Technology have the power to astonish. But what do they all add up to? How important is Information Technology as a whole? Is it like the invention of agriculture, or indeed the invention of language? These innovations were so profound that we cannot truly connect to what life must have been like before them. They created a civilization rather than just altering it. Or is Information Technology like the automobile, or the telephone? Both changed our lives, but not life itself. It is still possible to understand what things were like before we had them.

As the Smithsonian highlights specific achievements in the use of information technology each year, it also deepens its role as the place to go to ask bigger questions. The Smithsonian is a place where any of us, using our web browsers, can see what has happened over the past decade. Are you a seventh grader as Bill Gates was when he was sending away for computer brochures? Are you approaching retirement age as Seymour Cray was when he took up biology? Either way, here is some of what you will find in the Collection as we all ask, "how big is the Information Technology revolution?" Perhaps the results of your own investigation will find trends that others have missed.

Rapid Advances

One sure way to measure the ultimate impact of the Information Age is to look at what young people are doing with it. The changes here in just a decade have been startling. In the late 80's and early 90's, the dominant educational activity in the Permanent Research Collection was "computer literacy," also known as "computer appreciation."

Today terms like "computer literacy" are no longer part of our vocabulary and for good reason. Today's students are leading, not following. The most knowledgeable and aggressive users of the Internet are now high school students. Basketball coaches are no longer the only faculty members faced with students who could turn pro right out of high school. Computer whizzes are now getting their own lucrative offers to go straight into industry.

Ever made a rational decision
with all your heart?
Meet the most personal of personal computers: The very latest Compaq Armada notebooks. They're

anything a desktop can— COMPAQ anywhere you want. Notebooks that redefine the

the Armada notebook that's perfect for you) call 1-800-AT-COMPAQ. Or visit

Better answers.℠

notebooks that marry exceptional mobility with uncompromising performance. Notebooks that do

concept of value. To locate a reseller (and

www.compaq.com/products/portables/.

The New Compaq Armada.

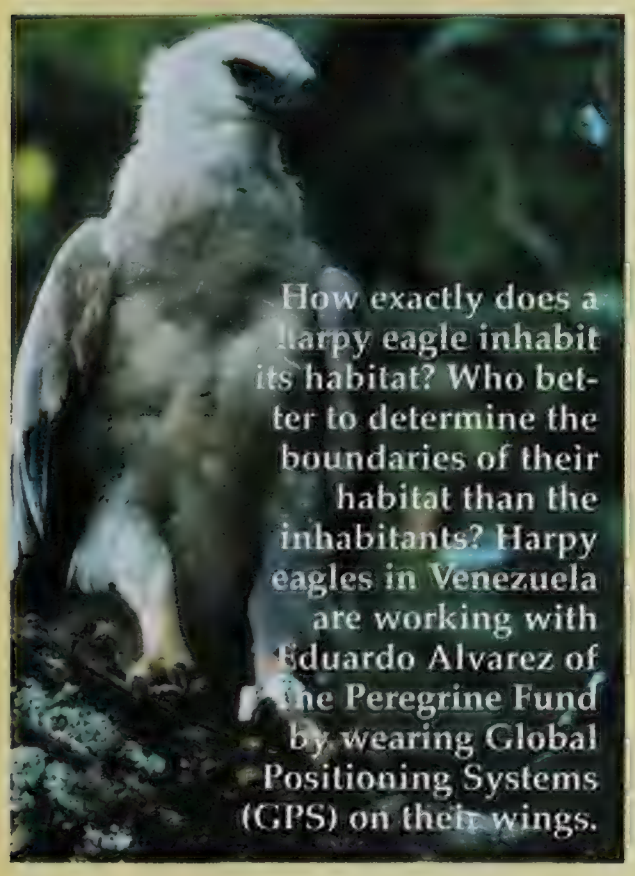
intel inside

pentium® II

©1998 Compaq Computer Corporation. All rights reserved. Registered trademarks, Armada is a trademark and Better answers is a service mark of Compaq Computer Corporation. Intel and the Intel Inside logo are registered trademarks of Intel Corporation.

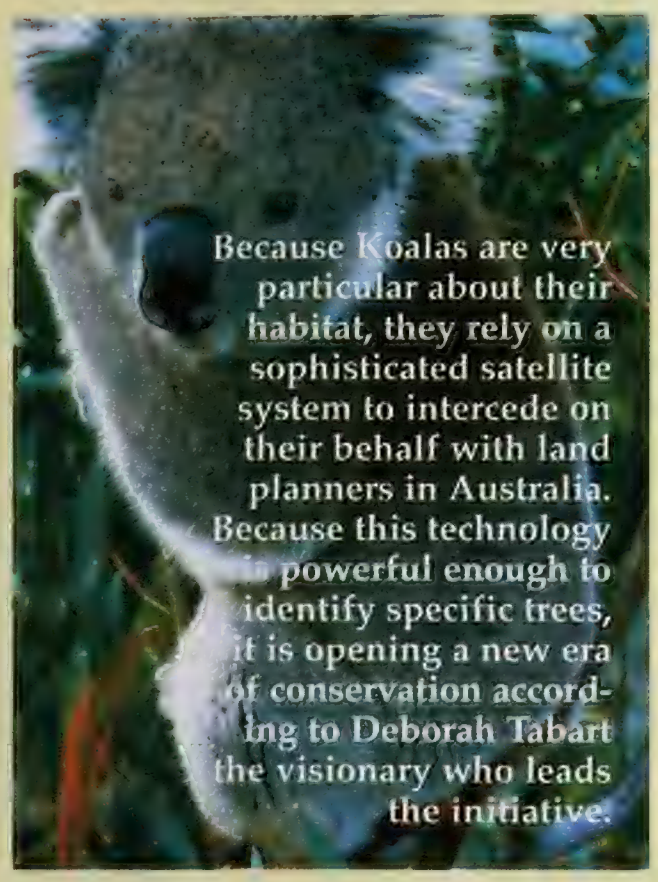
A Living Sense of Place

Old-fashioned maps show the forest, but not the forest fire; the nest, but not how the eagle chooses the nesting site; the farmland, but not the crop height. Today maps are alive. Connected to sensors in the forest, on the eagle, behind the farmer's tractor, they tell a real-time story about current status and projected needs.



How exactly does a harpy eagle inhabit its habitat? Who better to determine the boundaries of their habitat than the inhabitants? Harpy eagles in Venezuela are working with Eduardo Alvarez of The Peregrine Fund by wearing Global Positioning Systems (GPS) on their wings.

When Farmland Industries put sensors on their tractors to feed the irrigation equipment and fertilizer machines with soil data harvesting became much more efficient. Resources are now doled out intelligently, meet inch by inch needs and protect the environment.



Because Koalas are very particular about their habitat, they rely on a sophisticated satellite system to intercede on their behalf with land planners in Australia. Because this technology is powerful enough to identify specific trees, it is opening a new era of conservation according to Deborah Tabart the visionary who leads the initiative.

Real-time Satisfaction

From the boiling mud pockets of Yellowstone to the active lava flows of Hawaii, students around the world are exploring, investigating and satisfying their curiosity without leaving their classrooms. With computerized telepresence, students control scientific equipment and experience the real-time thrill of discovery.

After Dr. Robert Ballard discovered the Titanic, children who wanted to go on his next expedition wrote him thousands of letters. Dr. Ballard founded the JASON Project in 1989 to give true investigative power to students around the world. Dr. Ballards' invention allows students around the world to participate in exciting projects everyday.

Submitted in 1989, 1990 and 1998, there are three case studies on the JASON Project in the Innovation Collection.

Each year certain forest fires surprise us with their fury. Why do some fires explode out of control while others burn more gradually? Scientists at Brandon University are getting to the heart of that question using computer models which allow them to vary the conditions and see whether the fire shrinks or grows out of control.

David Packard and William Hewlett received the 1995 Price Waterhouse Leadership Award for Lifetime Achievement.

Founding Fathers

When Walt Disney needed technology for *Fantasia* in 1940, he went right to the brand-new two-person start-up, Hewlett-Packard. David Packard and William Hewlett went on to create a company that changed the culture of work and spawned the Silicon Valley phenomena. They did much more than shape this new industry, they helped shape many individuals who lead it.

With resources like the Computerworld Smithsonian web site (http://innovate.si.edu) high school students can study the history of Information Technology as written by the people who are using it. Ten years ago, this kind of research would have been impossible.

Meanwhile, the computers themselves have moved out of the school "computer labs," through the classrooms and right into the book bags. The single most important new development in this year's collection is the use of universal laptops (every student receives their own laptop that they use in class during the day and take home with them at night) starting as early as elementary school. Computing for these students is no longer a separate activity any more than writing is. It is simply something they do in order to learn.

Culture in the Third Dimension

In school we study the great advances of the Renaissance. One of them was the new use of perspective in art. Suddenly, art had a "viewpoint." The change was so fundamental that most people today find medieval art to be strange, even amateurish in comparison. What was it like to live through such a dramatic change in the way we see the world? We have the chance to find out because a change of similar importance is happening right now. Virtual reality technology means that we, not the creator of the artwork, decide what our viewpoint will be. If we want to go around back, or inside, we are welcome to do so. For example, a virtual reality representation of the city of Bologna will not only allow us to wander through, or over, the city streets, but also to go back in time through a thousand years to see how the cityscape developed.

How a Change in Viewpoint Can Change the Field of Medicine

Nowhere is the old Renaissance assumption of the fixed viewpoint more entrenched, or more grisly, than in the surgical operating room. The surgeon's viewpoint is from above. Whatever lies between this fixed viewpoint and the location to be operated on must be moved out of the line of sight before the operation itself can begin. Large incisions, some involving hack saws, are the norm. Recovery from these massive incisions is often more difficult than recovery from the actual operation.

Laparoscopic surgery changes all of that. The initial incision need only be big enough to allow a tiny video camera to be inserted and maneuvered to the location of the actual pathology. Miniature surgical instruments and lasers arrive by the same path. The surgery is performed without disturbance to the tissue along the former line of sight. Like any fundamental cultural advance, this revolution in viewpoint was hard for practitioners. The acceptance of ROBODOC hip replacement technology, which entered the Collection in 1991, was needlessly delayed because surgeons could not adapt to the video monitor point of view.

Better Than "Being There"

Whether in laparoscopic surgery or in ROBODOC, the change in surgeon viewpoint goes far beyond the mere shift within the operating room. Because the information is presented on a video screen, the viewer need not be in the operating room at all. Given sufficient bandwidth, the viewer can be a thousand miles away. More than that, the remote viewer can be more than just a passive spectator. Since the connection to the surgical instrument is also electronic, the remote viewer can be the surgeon. For now, this capability is being used largely for training purposes. Skilled laparoscopic surgeons are plugging in remotely to monitor and advise surgeons who have adopted the techniques more recently. Ultimately, there may be no need for both surgeons. Patients may prefer the more experienced surgeon to the more present one. Globally, surgery bids fair to become an export industry, as was first noted at the Smithsonian Medical Symposium in 1996.

The Real Impact: Biology

Computing is really much more like biology than it is like physics. Advances in cognitive science and the understanding of the genetic code have shown that information processing is central to the processes of life. Meanwhile, computers have become powerful enough to grapple with the vast complexity of biological information. Scientists are, for example, modeling the behavior of the entire heart at the level of the individual cell, seeking to isolate the arrhythmic behavior that leads to heart attacks. They are also probing the 3-D structure of the HIV protein seeking to design a novel class of drugs.

Also noteworthy is the way the culture of biology is expanding into other disciplines.

peo
im

The people who created
the first biofidelic crash test dummy...
Who introduced the first infant safety carrier...
Who designed the first traction control system...
Who pioneered the side-guard door beam...
And who developed the first child restraint system...
Have seen the results of their efforts
In over 200 million cars and trucks
From over 25 different manufacturers.
All because the people of one company believed
That nothing could be more important
Than helping to save lives.

GM® General Motors®

CHEVROLET PONTIAC OLDSMOBILE BUICK CADILLAC GMC
www.gm.com

General Motors Corporation © 1998

Information Age in the Bookbag

Today the most successful students come to class with their computers in their book bag. When each and every student has their own laptop, all students will benefit. Laptop-based education is "anytime, anywhere" education which is as much at home at the kitchen table as it is in the classroom itself. And why not?

Championship Thinking

Linda Roberts
Director, Office of Education Technology
United States Department of Education

How does the U.S. government ensure that technology, as it evolves, will be put to use in American classrooms to improve education? Via Linda Roberts: America's advocate for educational technology at the highest levels of government. Roberts is making certain that all discussions of the information superhighway include education.

Prior to joining the Department of Education, she directed a series of acclaimed studies for the Office of Technology Assessment. Her 1988 report "Power On!" was the first comprehensive assessment of the state of educational technology in the United States and a key step in getting us to where we are today.

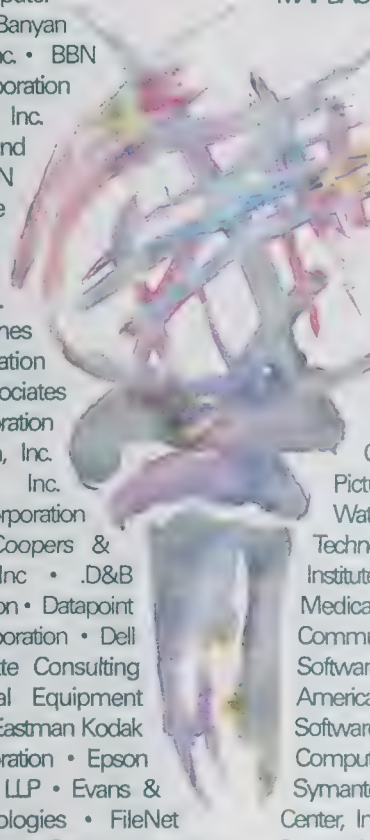
Roberts, recipient of the 1995 Zenith Data Systems Leadership Award for Education, is a leading expert in the application of technology to improve and reform education.

In Search of New Heroes

The Computerworld Smithsonian Program searches for individuals who use information technology to benefit society and honors them for their achievement. Each year their stories become part of the Smithsonian's Permanent Research Collection.

The chairman of the following companies have graciously served on the nominating committee during the past decade:

3Com Corporation • Acer America Corporation • Adobe Systems, Inc. • AGS Computers, Inc. • Amdahl Corporation, America Online, Inc. • Andersen Consulting • Apollo Computer • Apple Computer, Inc. • Arthur D. Little, Inc. • Ascom Timeplex • ASK Computer Systems • AT&T Corporation • Banyan Systems, Inc. • Bay Networks, Inc. • BBN Corporation • Bell Atlantic Corporation Bellcore • BMC Software, Inc. Booz-Allen & Hamilton, Inc. • Borland International, Inc. • Bull HN Information Systems, Inc. • Candle Corporation • CIMLINC Incorporated • Cincom Systems, Inc. • Cisco Systems • Comdisco, Inc. Commodore Business Machines Compaq Computer Corporation CompuServe • Computer Associates International, Inc. • Computer Corporation of America • Computer Motion, Inc. Computer Task Group, Inc. Computerworld • Compuware Corporation Control Data Corporation • Coopers & Lybrand • Cray Research, Inc • .D&B Software • Data General Corporation • Datapoint Corporation • Dataproducts Corporation • Dell Computer Corporation • Deloitte Consulting Diebold, Incorporated • Digital Equipment Corporation • Easel Corporation • Eastman Kodak Company • EDS • EMC Corporation • Epson America, Inc. • Ernst & Young, LLP • Evans & Sutherland • Excalibur Technologies • FileNet Corporation • Gandalf Technologies • Geac Smartstream GTE Internetworking • Hayes Corporation • Hewlett-Packaxrd Company • Hitachi Data Systems Hughes Network Systems • IBM Corporation Information Builders, Inc. • Informix Software • Ingres Corporation • Intel Corporation • International Data Group JD Edwards • KPMG Peat Marwick, LLP • Kurzweil Applied Intelligence • Legent Corporation • Lemout & Hauspie • Lexmark International, Inc. • Lockheed IMS Lotus Development Corporation • Madge Network Systems MAI BASIC FOUR, Inc. • Management Science America, Inc. • Matsushita Electric Corporation of America • McData Corporation McDonnell Douglas Systems MCIWorldCom • Microcom Microdyne • Microsoft Corporation Morgan Stanley & Co., Inc. • Motorola, Inc. • National Advanced Systems • NCR Corporation • NEC Technologies, Inc. NetFRAME Systems, Inc. • Netscape Communications Corporation • NeXTComputer, Inc. • Nolan, Norton & Co. • Northern Telecom Novell, Inc. • NYNEX Corporation • On-Line Software, Inc. • OneWave, Inc. • Oracle Corporation • Packard Bell NEC, Inc. • Panasonic Communications & Systems PeopleSoft, Inc. PictureTel • Platinum Technology, Inc. • Price Waterhouse • Red Brick Systems, Inc. • Relational Technology, Inc. • SAIC • SCO • SAP America, Inc. • SAS Institute, Inc. • Sequent Computer Systems, Inc. • Shared Medical Systems Corporation • Siemens Business Communication • Silicon Graphics, Inc. • SMS Corporation Software AG of America, Inc. • Software Engineering of America, Inc. • Sprint • Stardent Computer, Inc. • Sterling Software, Inc. Storage Technology Corporation • Stratus Computer, Inc. • Sun Microsystems, Inc. • Sybase, Inc. • Symantec Corporation • Syntex Technologies • Systems Center, Inc. • Tandem Computers Incorporated • Tandy Corporation • Technology Solutions Company • Texas Instruments • Toshiba America Information Systems U.S. Robotics, Inc. • UB Networks, Inc • Unisys Corporation UNIX Systems Laboratories • Wang Global, Inc. • Wellfleet Communications, Inc. • Wyse Technology • Xerox Corporation • Zenith Data Systems



Patrick J. McGovern, Chairman of International Data Group, and Roger Kennedy, then Director of the Smithsonian's National Museum of American History, founded the Computerworld Smithsonian Awards in 1988.

Computerworld was founded by McGovern in 1967 to serve the new, rapidly evolving needs of information technology leaders.

The Innovation Network, the official Internet site of the Computerworld Smithsonian Program, is made possible by a generous grant from MCIWorldcom. Visit the CWSA Laureates and learn more about their innovations at http://innovate.si.edu.

To learn more about the Computerworld Smithsonian Program, contact Jen Adams by e-mail, cwsa@cudaback.com or call (617) 478-2704.

James Bailey, author of *After Thought*, is an independent scholar who lives in Arlington, Massachusetts. Section design by Liza Parks.

Tom Lippert is the photographer of record for the Program, and is responsible for the majority of images in this section. Other photographers whose work is included are Rick Vargas and Kathleen King. The remaining images were submitted to the Smithsonian Archives by the CWSA Laureates.

Credit card companies now use biologically-inspired algorithms such as neural networks to detect fraudulent credit card usage. These neural networks replace the old numbers and equations of physics.

Finally, there is the singular character of the human genome project–the detailing of our complete genetic inheritance. Within the Permanent Research Collection, it is installed as a single application alongside thousands of others. It is indeed a single application, but in its scope and its significance it can be considered bigger than all the others put together. It is being carried out on a world-wide scale, with the data pooled on the Internet and made available on a daily basis. Its effect on society will be total, because it implies the ability to routinely alter human life if society chooses to do so.

A New Fertile Crescent?

One of the most powerful lessons we learn from biology is that "history matters." In the short term, we keep on doing what we have always done, even as the world changes around us. Truly radical change is trans-generational. It comes with a new generation that never had any attachment to the older ways. It is in that context that we need to weigh the possibility that civilization itself is undergoing replacement.

Thirty years from now it is likely that, in advanced countries, every graduating high school senior will have their own laptop computer, and will have had it at least since junior high school. It is a certainty that the accumulated knowledge of the human genome project will have matured into everyday medical practice. The ability to alter human life will be well-established. Finally, the psychological barriers to action at a distance ("tele-everything") will be long gone. These changes alone do not guarantee a new form of civilization but they definitely open the door to the possibility.

The Information Age is more than just a new chapter in the history books. It may mean a whole new definition of history itself, one that is no longer carried in books at all, but in a much more dynamic medium. We may be in the formative stages of a whole new civilization, with Information Technology creating a crescent as fertile as any that have come before. Anyone interested in culture and the meaning of civilization should be paying close attention to Information Technology right now. ■

A closed network is an oxymoron.

Networks are about open access.

Different people and different technologies, working together to make your business better. Everything we do, every product we make, is dedicated to this one ideal.

We're networking specialists.

Other software companies insist that their stuff will only work properly with their stuff. That's fine for them. For us, that's not really a network.

NetWare® 5, our new network software, works cross-platform. It integrates. It even makes our competitor's products better. Why?

Our customers need solutions, not contradictions.

www.novell.com/open

Novell®

open/net/works

© 1998 Novell, Inc. All rights reserved. Novell and NetWare are registered trademarks of Novell, Inc. in the United States and other countries.

Raising Dragons
by Jerdine Nolen,
illustrated by
Elise Primavera

The Pumpkin Runner
by Marsha Diane Arnold,
illustrated by Brad Sneed

Nothing Here But Trees
by Jean Van Leeuwen,
illustrated by Phil
Boatwright

Home to Medicine Mountain
by Chiori Santiago, illustrated by Judith Lowry

SMITHSONIAN's Notable Books for Children, 1998

BY KATHLEEN BURKE

ON CHRISTMAS EVE IN 1957, MICHAEL BOND, A 32-YEAR-old freelance writer and BBC cameraman, who was also an inveterate last-minute shopper, wandered into a London department store. As he roamed the aisles in search of a gift for his wife, he happened upon a display of toys. "On one of the shelves," he recalled, "I came across a small bear looking, I thought, very sorry for himself as he was the only one who hadn't been sold."

Bond promptly had the stuffed toy bundled into a parcel and carried him home.

The Bonds christened their ursine acquisition "Paddington," as the couple happened to be living near Paddington Station. "Then," Bond remembered, "one day, when I was sitting in front of my typewriter staring at a blank sheet of paper, I idly tapped out the words 'Mr. and Mrs. Brown first met Paddington on a railway platform. In fact, that was how he came to have such an unusual name for a bear.'"

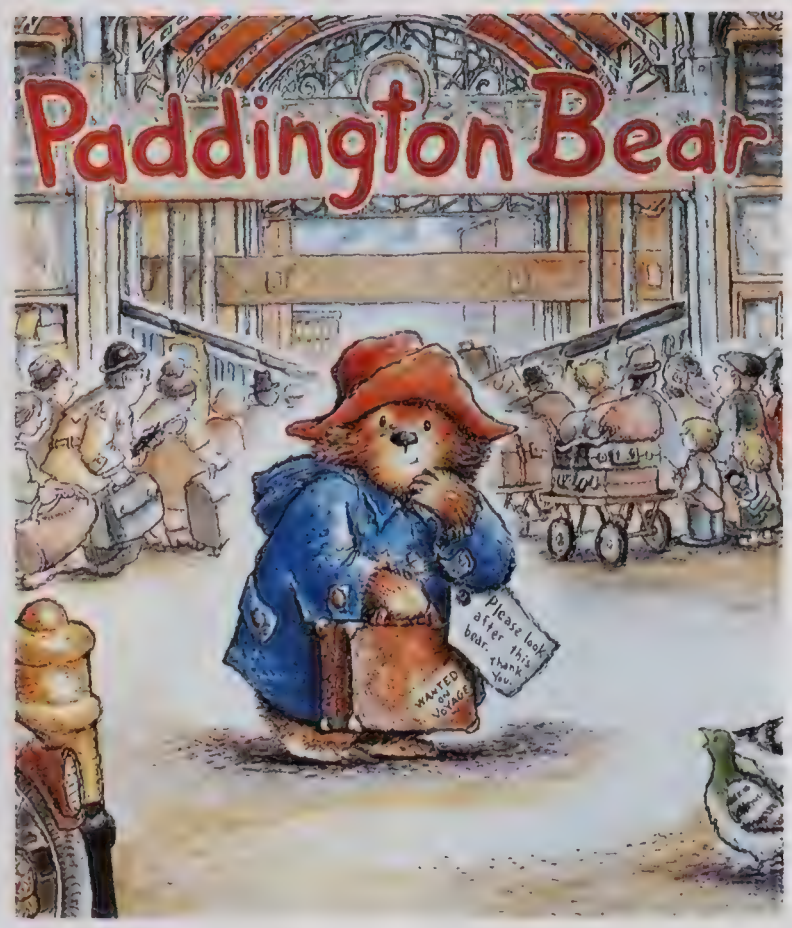
Within a few months, Bond had sold the manuscript for *A Bear Called Paddington* to a large British publishing house. One of the

most beloved characters in children's literature, a small, scruffy fellow outfitted in a duffel coat and shapeless bush hat, made his appearance in 1958. When the bear's benefactors, the fictional Brown family, came upon Paddington, befuddled and abandoned, in the railway station, they found a note, now famous to readers around the world, fastened to his sleeve: "PLEASE LOOK AFTER THIS BEAR. THANK YOU."

This year marks the 40th anniversary of Bond's first novel. It has been four decades since that furry stowaway, hidden in a lifeboat and subsisting on marmalade during his passage by sea "from darkest Peru," arrived on the railway platform. Over the years, Paddington has become a fixture of the nursery. All told, Bond has produced a series of 14 Paddington novels, including *Paddington Marches On*, *Paddington Helps Out* and *Paddington Abroad*. (The complete series, illustrated with Peggy Fortnum's winsome line drawings, is available in hardcover from Houghton Mifflin, at $15 per title.) The bear's ongoing adventures have been translated into 20 languages and sold in the millions of copies.

Bond also has adapted, and quite successfully, Paddington's antics for very young readers, in board and picture books. An abridged picture-story version of that first novel, newly illustrated in a commemorative edition by artist R. W. Alley and entitled *Paddington Bear*, has been published this fall by HarperCollins ($12.95).

Whatever the audience—children up to 8 or so, enjoying the novels; the preschool set, turning the pages of the picture stories; or grown-ups, reading any of these titles aloud—Paddington exerts an enduring charm. The appeal lies partly in the pace: Paddington is unhurried, and we are all participants in the bear's dozy perambulations.



Paddington Bear by Michael Bond, illustrated by R.W. Alley

Take, for instance, a visit to Paddington's steadfast friend, Mr. Gruber, the antiques merchant whose shop faces onto Portobello Road: "Paddington often stopped there on his way home from a shopping expedition and they spent many hours discussing South America, where Mr. Gruber had been when he was a boy. Mr. Gruber usually had a bun and a cup of cocoa in the morning for what he called his 'elevenses,' and he had taken to sharing it with Paddington."

Even more alluring, though, is the spirit of unabashed goodwill pervading all the books. The Browns—Mary and Henry—simply clasp Paddington in their arms and trundle him home to 32, Windsor Gardens, no questions asked. "We shall expect you," announces Mrs. Brown as they leave the station, "to be one of the family." (The family also includes the children, Judy and Jonathan, and the redoubtable housekeeper, Mrs. Bird.)

The subsequent adventures (largely misadventures, to be sure) befalling Paddington make allowance always for the bear's signature and unerring amiability in the face of his own ineptitude. Whether he is sweeping soot from the chimney, making a muddle of magic tricks or attempting to erect the sandcastle of his dreams, Paddington always lands squarely on his own two paws. In the end, as Mrs. Brown herself affably reminds us, "It's nice having a bear about the house."

This year's children's titles carry us, too, into a province where generosity and compassion, courage and high spirits, perception and justice, not only endure but win out.

Please note that age categories are quite arbitrary: consult the temperament and predilections of the individual child.

The following titles are available in the Museum Shop at the Smithsonian's Arts & Industries Building, or can be ordered by calling (202) 357-1368, from 10 A.M. to 5 P.M., seven days a week.

For the Youngest Readers [Ages 2-6]

Catherine and Laurence Anholt's Big Book of Families (Candlewick, $16.99) From the British author-illustrators comes this cheeky, lyrical tribute to the ties and traditions that bind us together.

Baby Born by Anastasia Suen, illustrated by Chih-Wei Chang (Lee & Low, $6.95) The seasons of a child's first year, tenderly conveyed in an inventive lift-the-flap book.

A Child's Treasury of Nursery Rhymes compiled and illustrated by Kady MacDonald Denton (Kingfisher, $17.95) A spirited and comprehensive collection of verse—old favorites and new discoveries—accompanied by winning watercolors.

Little Farm by the Sea written and illustrated by Kay Chorao (Henry Holt, $15.95) Recalling her sojourns to the real Smallholdings Farm on Long Island, Chorao follows one family's workaday rhythms—seedlings are

Preserve your independence and help protect your life savings, with the leader in long term care insurance.

When it comes to long term care, there are two things you should know: Two out of five people aged 65 will need it during their lifetime.[1] And, more people than ever before are turning to the GE Financial Assurance family of companies for long term care insurance. See how we can help you afford quality at-home and nursing home care while helping to protect your life savings. For more information from a licensed representative,[2] call 1-800-404-2956.
For every step you take in life, you can trust GE to help.

We bring good things to life.

[1] Management Accounting (USA), February 1994.
[2] Offer not available in all states.

Insurance products underwritten by General Electric Capital Assurance Company and, in New York, by GE Capital Life Assurance Company of New York, members of the GE Financial Assurance family of companies. Assets of the issuing insurance companies back the policies.
#81584

The Adventures of Mr. Toad from ***The Wind in the Willows*** by Kenneth Grahame, illustrated by Inga Moore

sown, piglets born, crops harvested. She pays gentle homage to a way of life that is fast disappearing.

Tomcat Takes a Walk written and illustrated by Pippa Unwin (Andersen/Trafalgar, North Pomfret, Vermont, $17.95) One tiger-stripe tabby finds adventure and friendship day by day. Unwin's richly detailed drawings also invite us into an English village's cheerful universe of tea shop and fishmonger, riverbank and row house.

Alison and Aldo written and illustrated by Alison Lester (Houghton-Mifflin, $15) "Breakfast in bed" to "giddy on the grass," this exceptional alphabet book is also a beckoning reprise of a young child's day.

A Summery Saturday Morning by Margaret Mahy, illustrated by Selina Young (Penguin/Viking, $15.99) Tramping to the beach with dogs barking and geese nipping at the heels, in a riotous romp.

Just like Floss written and illustrated by Kim Lewis (Candlewick, $15.99) Floss, as Lewis' many admirers know, is a Border collie as trustworthy as the day is long. This title, the newest offering in the author's ongoing chronicle of the Northumbrian farm where she lives, introduces the herd dog's puppies.

Santa Mouse and the Ratdeer written and illustrated by Thacher Hurd (HarperCollins, $14.95) The tinsel is tangled, the tree is lurching dangerously, and Santa is hopelessly lost. Never fear, dauntless Rosie mouse is only a few paw prints away. I'd walk through a blizzard for a new title from Hurd.

Barn Cat by Carol P. Saul, illustrated by Mary Azarian (Little, Brown $15.95) A counting book and much more, this rendition of one feline's farmyard quest is accompanied by hand-colored woodcuts.

Uncle Phil's Diner written and illustrated by Helena Clare Pittman (Carolrhoda Books, Minneapolis, Minnesota, $14.95) Into the stinging cold, a father and his young daughter set out for the family diner, where a platter of blueberry pancakes awaits them. The perfect book to open on a snowy morning.

Katie Morag and the Grand Concert written and illustrated by Mairi Hedderwick (Bodley Head/Trafalgar, North Pomfret, Vermont, $19.95) Another fetching installment in the series on life in a fishing village off the coast of Scotland, this time featuring Katie as a neophyte chanteuse.

Tell Me Something Happy Before I Go To Sleep by Joyce Dunbar, illustrated by Debi Gliori (Harcourt Brace, $16) For little bunnies resisting slumber, Dunbar delivers a reassuring recital of the adventures sure to unfold in the morning.

And If the Moon Could Talk by Kate Banks, illustrated by Georg Hallensleben (Farrar Straus Giroux, $15) "Twilight blazes a trail across the wall": night steals into a child's room and a tranquil darkness descends.

In the Hush of the Evening by Nancy Price Graff, illustrated by G. Brian Karas (HarperCollins, $14.95) Fireflies dance, crickets drone: a dreamy, poetic bedtime book.

For Middle Readers [Ages 6-10]

Raising Dragons by Jerdine Nolen, illustrated by Elise Primavera (Harcourt Brace, $16) "I knew everything about dragons," avers our heroine, "and I knew they were real." Rush to the bookstore for this magical, high-spirited paean to the power of nurturing and loyalty.

Mrs. Mack written and illustrated by Patricia Polacco (Putnam/Philomel, $16.99) The distinguished author-illustrator revisits the summers of her Michigan childhood to summon up the world of the tumbledown stable where she learned to ride. The central figure is an unforgettable woman, wise in the way of children and horses, who is both teacher and friend.

Painted Dreams by Karen Lynn Williams, illustrated by Catherine Stock (Morrow/Lothrop, $16) A mango pit, fragments of charcoal, pieces of orange brick: with these tools, a girl determined to overcome adversity sets out to paint the mural of her dreams. This celebration of creativity's deep rewards is set in Haiti, where the writer lived for two years.

The Time of the Lion by Caroline Pitcher, illustrated by Jackie Morris (Beyond Words, $15.95) "Past the wildebeest, round the elephants" waits the great golden beast who befriends a boy. A rumination on companionship and constancy, set against the savanna.

The Patchwork Quilt & Other Stories from Around the World written and performed by Sharon Kennedy (Rounder Records, tape, $9.50; CD, $15.97) Although these tales are available only in recorded form, Kennedy's entrancing stories deserve a wide audience.

The Shaman's Apprentice: A Tale of the Amazon Rain Forest by Lynne Cherry and Mark J. Plotkin (Harcourt Brace/Gulliver Green, $16) Plotkin, the renowned ethnobotanist, and best-selling artist-author Cherry have cre-

Somewhere at sea, time stands still. Thalassotherapy restores body and soul. Pools of fresh, warmed seawater calm, nourish, renew. Skin, hair, muscle and mind find solace with the people and programs of Celebrity's AquaSpa.℠ Of all the planet's great spas, you can count the number that float on the fingers of one hand. AquaSpa, the most luxurious spas at sea. Just one of the signature elements that make Celebrity the best premium cruise vacation on the planet. Call your Travel Agent or 1-800-CELEBRITY, ext. 73, for a free brochure. Because in an imperfect world, we're exactly what mind and body crave.

Celebrity Cruises®

Exceeding expectations.℠

CENTURY • GALAXY • HORIZON • MERCURY • ZENITH

www.celebrity-cruises.com

ated a compelling portrayal of one tribe and its reliance on the healing plants of the rain forest. The outstanding natural history and environmental title of the year. A portion of the proceeds from this book is donated to preserve native forests.

The Kingfisher Children's Encyclopedia (Kingfisher, $35) Ancient history to current developments in technology, more than 3,500 indexed references, splendidly illustrated. For browsers as young as 8 or so and more confident readers up to about 14, a one-volume mine of information.

The Riches of Oseola McCarthy by Evelyn Coleman, illustrated by Daniel Minter (Albert Whitman, Morton Grove, Illinois, $14.95) A few years ago, McCarthy, at the age of 87, became a household name after she endowed a college scholarship with the savings she had amassed over a lifetime as a laundress. This affectionate biography salutes the dignity of hard work and keeps us mindful of the privilege that underlies education.

Tracks in the Wild written and illustrated by Betsy Bowen (Houghton Mifflin, $16) "Each track tells a story": from her northwoods home on Lake Superior, Bowen observes and marvels at fox and otter, black bear and moose. Her wood-block prints are as bold and haunting as the wolf's howl on a winter night.

The Pumpkin Runner by Marsha Diane Arnold, illustrated by Brad Sneed (Penguin Putnam/Dial, $15.99) In 1983, a 61-year-old Australian farmer captivated the nation when he won the 542-mile run between Sydney and Melbourne—and split the $10,000 reward with his fellow contestants. Arnold's spritely narration of a marathoner's triumph is a delight from start to finish.

Pockets by Jennifer Armstrong, illustrated by Mary GrandPré (Crown, $17) When a mysterious seamstress arrives in a remote outpost, she begins to embroider the linings of the villagers' pockets. Suddenly an entire town acquires a hunger for beauty and a sense of possibility.

One-Room School by Laurence Pringle, illustrated by Barbara Garrison (Boyds Mills, Honesdale, Pennsylvania, $15.95) Drinking well water; playing fox-and-geese in the snow; a teacher whose tame woodchuck hankered after ice cream. The author has conjured up the joys of his old-fashioned classroom and the world of home-front America in 1944.

With Love: Ten Heartwarming Stories of Chimpanzees in the Wild by Jane Goodall, illustrated by Alan Marks (North-South, $15.95) Drawing on research conducted in the forests of Tanzania for nearly 40 years, the legendary primatologist writes of infant chimps adopted, siblings rescuing siblings and more. This inspiring depiction of devotion among the chimps underscores our kinship with these threatened creatures.

Nothing Here But Trees by Jean Van Leeuwen, illustrated by Phil Boatwright (Penguin/Dial, $15.99) Into the Ohio wilderness, where trees grew "so wide around a man could easily live inside a hollow one," a family carves a homestead. The events of the settlers' first year carry us deep into early 19th-century America.

Master Weaver from Ghana by Gilbert "Bobbo" Ahiagble and Louise Meyer, photographs by Nestor Hernandez (Open Hand, Seattle, Washington, $18) The intricacies of loom and treadle are explained with precision in a profile of artisan Ahiagble. At their compound, the extended family produces strip-woven fabrics sought after throughout the world.

The Long March: The Choctaw's Gift to Irish Famine Relief written and illustrated by Marie-Louise Fitzpatrick, Choctaw editing and foreword by Gary WhiteDeer (Beyond Words, $14.95) In 1847, an impoverished group of Choctaw Indians, learning that Ireland's people were starving, collected a substantial donation and sent it to aid the suffering.

La Mariposa by Francisco Jiménez, illustrated by Simón Silva

The author-illustrator traveled from Dublin to Oklahoma in order to research a little-known and luminous chapter in Native American history.

G is for Googol: A Math Alphabet Book by David M. Schwartz, illustrated by Marissa Moss (Tricycle, $15.95) *A* for Abacus; *V* for Venn Diagram. Quite a rare commodity: a mathematical text displaying clarity and wit in equal measures. Math addicts will be dazzled; phobics will be drawn in despite themselves.

Wolf Christmas by Daniel Pinkwater, illustrated by Jill Pinkwater (Cavendish, Tarrytown, New York, $15.95) At the heart of this winter holiday season lies a sense of connection among creatures great and small. Thanks to the Pinkwaters, we can, together, feel the wind in our fur.

Stone Wall Secrets by Kristine and Robert Thorson, illustrated by Gustav Moore (Tilbury House, Gardiner, Maine, $16.95) On a fine autumn day, a grandfather and his grandson repair the wall on their Maine farm. The rocks they heft offer passage to the realms of geology, history and anthropology in a seamless, richly interdisciplinary narrative. A separate teacher's text, ***Stone Wall Secrets Teacher's Guide: Exploring Geology***

Two heads are better than one.

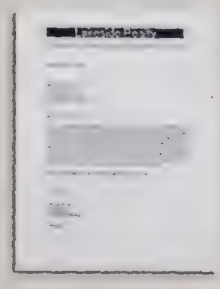
Dual Printheads
let you mix and match various ink cartridges to fit your needs. So you get the ultimate in versatility, speed, and quality.

Pretty smart. Canon's versatile BJC-5000 Color Bubble Jet™ printer. Its unique dual cartridge system (along with over 60 years of industry-leading savvy) gives you the ultimate in speed, quality and flexibility. So you get everything from fast, rich, black text to 7-color printing for stunning photo-quality images. All for around $249*. Call 1-800-OK-CANON or visit our Web site at www.ccsi.canon.com/2heads to find out more. **See what we mean.™**

Photo Realism

bring missing children HOME program

†BJC-5000 comes standard with one BC-21e and one BC-23 ink cartridge. Additional ink cartridges must be purchased separately. *Estimated street price. Dealer prices may vary. Output shown printed using optional Photo Kit, sold separately. "Bike Adventures" is a fictitious company. Any resemblance to other organizations is coincidental. ©1998 Canon Computer Systems, Inc. Canon and BJC are registered trademarks and Bubble Jet, PhotoRealism and "See What We Mean" are trademarks of Canon Inc. In Canada, call 1-800-263-1121.



High-Speed, Enhanced Black

Two black ink cartridges† *used together give you sharp, perfect text that zips out with impressive speed.*

Enhanced Black with Spot Color

One black and one color cartridge† *work side by side to bring you sharp text and brilliant spot color in tandem.*

High-Quality, High-Speed Color

Two color ink cartridges† *add up to bright, photo-realistic color printing right when you need it.*

Photo-Quality, 7-Color Printing

One Photo Ink and one color cartridge† *in unison create our exclusive 7-color printing for true photo-quality images.*

Canon

A Summery Saturday Morning by Margaret Mahy, illustrated by Selina Young

in the Classroom by Ruth Deike, $9.95, also is available.

La Mariposa by Francisco Jiménez, illustrated by Simón Silva (Houghton Mifflin, $16) Thrust into an English-speaking first-grade classroom, a migrant child struggles to cross the language barrier. Each day, he paints images of butterflies; it is this talent beyond words that unlocks doors for him. This quiet, affecting story, rooted in the author's childhood, also is available in a Spanish text.

The Young Astronomer by Harry Ford (DK, $15.95) Chockablock with dramatic images, Ford's guidebook features projects and activities, including information on how to locate meteor showers.

Johnny on the Spot written and illustrated by Edward Sorel (Simon & Schuster, $16) Through the author-artist known to us for his *New Yorker* cartoons, we make the acquaintance of a boy hero in 1940s Brooklyn who travels 24 hours ahead into the future to make his dreams come true. We're keeping our fingers crossed for more children's titles from Sorel.

The Barefoot Book of Princesses retold by Caitlín Matthews, illustrated by Olwyn Whelan (Barefoot Books, Brooklyn, New York, $17.95) Talking birds, magic red beans and, of course, resourceful heroines, tumbling out from a jaunty, fantastical compendium that reflects sources as various as Scandinavia, China and Persia.

Grand Canyon: Exploring a Natural Wonder written and illustrated by Wendell Minor (Scholastic, $16.95) Working in the tradition of the 19th-century artists who documented the Western landscape, Minor took his brushes and paints to the Grand Canyon last year. The series of radiant watercolors he completed there offers a sunlight-to-shadows portrayal of an artist working in the open air.

The Adventures of Mr. Toad from ***The Wind in the Willows*** by Kenneth Grahame, illustrated by Inga Moore (Candlewick, $21.99) It seems heretical to suggest that anyone attempt to illustrate *The Wind in the Willows* after Ernest H. Shepard's original watercolors appeared. But Moore has brought her own vision to the well-loved landscape of sheepfold and fen, meadow and manse. The result is this exquisite volume, a sequel to *On the Riverbank*, her adaptation of earlier chapters of the classic.

Home to Medicine Mountain by Chiori Santiago, illustrated by Judith Lowry (Children's Book Press, San Francisco, California, $15.95) In the 1930s, Lowry's Maidu Indian father and uncle were sent to live at a government residential school for the academic year. But each summer the two homesick and venturesome boys rode the rails, hitching onto an overnight train to return to "their mother's good food" and "their grandmother's stories of cleverness and courage." Their story, told with forthrightness and heart, is also the legacy of generations of Native Americans.

The Last Safe House: A Story of the Underground Railroad by Barbara Greenwood, illustrated by Heather Collins (Kids Can Press, Buffalo, New York, $9.95) Interweaving the fictional story of one slave family's escape to Canada and chapters setting out the history of that era, this superb text vivifies the stories behind the flight to freedom.

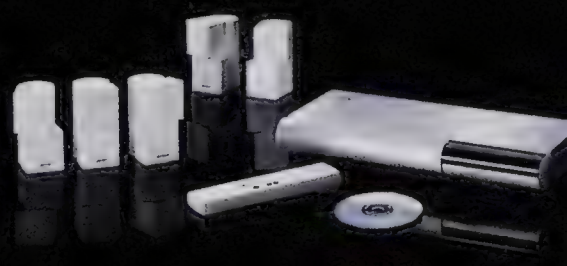
Greek Gods and Goddesses retold by Geraldine McCaughrean, illustrated by Emma Chichester Clark (Simon & Schuster, $20) "No," writes the author, "the gods were not perfect, just marvelous. They ate magic food, covered astounding distances, wielded wonderful weapons. . . . " McCaughrean's insouciant retelling of the myths, coupled with Clark's perceptive paintings, makes for a lively introduction to these timeless tales.

Waltz of the Scarecrows by Constance W. McGeorge, illustrated by Mary Whyte (Chronicle, $14.95) Dancing in the light of the moon, the stuffed-straw figures who guard our harvest vault into a realm that might, after all, be real.

The Horribly Haunted School by Margaret Mahy, illustrated by Robert Staermose (Viking, $14.99) When the ghost of a benevolent headmaster returns to roam his hallowed halls, cheerful mayhem ensues. All of Mahy's larky, literate novels and short stories are works of joy and genius.

Celebrate! Stories of the Jewish Holidays by Gilda Berger, illustrated by Peter Catalanotto (Scholastic, $17.95) Growing out of the traditions of Jewish storytelling, the tales includ-

DO YOU CHALLENGE CONVENTION?



Actual Size

LIFESTYLE®

HOME THEATER

SYSTEMS

What do you need for sound that brings your favorite movies, music and sports programs to life? Giant speakers? Racks of complicated electronics? Or is there something different? Something better? Hear a Lifestyle® system, and hear why *Stereo Review* believes, "There is simply nothing else like it."*

BOSE®
Better sound through research®

1.800.444.BOSE
Please Ask For Ext. 683

For information on all our products:
www.bose.com/challenge

Painted Dreams by Karen Lynn Williams, illustrated by Catherine Stock

ed here reflect the rhythms of the year. A treasury to be shared by the family, this collection encompasses stories, recipes, crafts and commentary.

Faraway Summer by Johanna Hurwitz, illustrated by Mary Azarian (Morrow, $15) In a fictional evocation of the summer of 1910 in Jericho, Vermont, a 10-year-old Russian immigrant girl leaves her Lower East Side tenement for two weeks as a Fresh Air Fund child. In her diary, she records that idyll of blackberry picking and sunlit days.

Down to Earth: Garden Secrets! Garden Stories! Garden Projects You Can Do! Created by Michael J. Rosen (Harcourt Brace, $18) In a tempting thicket of a book, 41 children's authors and illustrators share memories of favorite green spaces—dandelion-punctuated lawn to lovingly tended tomato plot. The proceeds support the community gardens project of SOS (Share Our Strength).

A Cobtown Christmas by Julia Van Nutt, illustrated by Robert Van Nutt (Doubleday, $15.95) From the imaginary 19th-century American village created by the Van Nutts, another chapter in the saga of a hamlet where generosity is part of the fabric of everyday life.

Tibet Through the Red Box written and illustrated by Peter Sís (Farrar Straus Giroux, $25) In the mid-1950s, Sís' father journeyed from Czechoslovakia to Tibet: his son has conjured up a phantasmagorical re-creation of that trek into a numinous landscape.

Love from Your Friend Hannah by Mindy Warshaw Skolsky (DK, $17.95) Life is a little too dull in Grandview, New York, in 1937—until our irrepressible heroine finds herself some pen pals, including Franklin and Eleanor Roosevelt. Narrated as a series of letters, this novel offers an enthralling portrait of 1930s America.

For Older Readers [Ages 10 and up]

A Home by the Sea: Protecting Coastal Wildlife by Kenneth Mallory (Harcourt Brace/Gulliver Green, $18) "New Zealand," writes the author, "stands as a shining example of what can be done to protect our endangered coastal animals." Profiles of three successful conservation efforts, on behalf of the Hector's dolphin, the yellow-eyed penguin and the little blue penguin, offer a vivid portrayal of field scientists and wildlife rehabilitators at work.

In a Dark Wood by Michael Cadnum (Orchard, $17.95) In a brilliant inversion of the Robin Hood legend, Geoffrey, Sheriff of Nottingham, himself becomes the hunted. During his interlude as quarry in the green imprisonment of Sherwood Forest, he must learn to sound the depths of mercy. The novel, unsparing in its representation of medieval England's pervasive brutality, also is a deeply affirmative and rewarding work for readers of any age. Not to be missed. Note: includes a minimal amount of sexual content.

Pharmacy in the Forest: How Medicines Are Found in the Natural World by Fred Powledge (Atheneum, $17) This transfixing description of a great scientific enterprise—the discovery of medicinal plants, and the investigation of those substances in the laboratory—draws on the disciplines of botany, ethnobotany, biochemistry, epidemiology and more to survey the treasures awaiting identification in forests worldwide. Inside these pages, an aspiring young scientist could find inspiration for a life's work.

The Kingfisher Young People's Book of Space by Martin Redfern (Kingfisher, $19.95) Black holes to galaxies, the solar system to the Milky Way, explicated with lucidity.

The Quicksand Pony by Alison Lester (Houghton Mifflin, $15) From the peerless picture book creator, a soaring first novel set in the rugged seaside farm country of Australia where the author grew up. Centered around the character of a boy, raised in isolation in a wild landscape of dune and woodland, Lester's suspenseful tale is a heartening meditation on the bonds entwining humans with their animal compatriots.

Story Painter: The Life of Jacob Lawrence by John Duggleby (Chronicle, $16.95) This substantial biography traces the evolution of genius. The text, accompanied by 25 color plates, is grounded in the great historical themes that inform Lawrence's interpretation of our American experience.

The Shakespeare Stealer by Gary Blackwood (Penguin/Dutton, $15.99) When young Widge, homeless and friendless, is taken on as a player at the Globe Theatre, he finds an unexpected refuge. Blackwood's depiction of the actor's life in 16th-century London is the backdrop for a briskly paced plot (turning on a coveted manuscript entitled *Hamlet*) and a cast of memorable characters.

Greek Myths retold by Jacqueline Morley, illustrated by Giovanni Caselli (Peter Bedrick Books, New York, New York, $22.50) From Prometheus' defiant gift of fire to the homecoming

Everyone's telling you to cross over to a Roth IRA now. We'll help you decide if it makes sense to go.

Call now for your free Merrill Lynch guide and get the facts on converting before the December 31 deadline.

Since there are significant tax benefits for converting your existing IRA before December 31, 1998, most advisors are saying run—don't walk—to switch. But will a Roth IRA really help you manage your retirement assets more effectively? If so, how?

A Merrill Lynch Financial Consultant can help answer your questions about the Roth IRA, starting with whether it's right for you. We'll show you how it can keep your retirement assets growing tax free longer and give you more flexibility down the road. So before you get a Roth, get the facts on conversion from Merrill Lynch.

Minimize taxes.
Convert by December 31, 1998.

Merrill Lynch

For this free guide, call 1-800-MERRILL, ext. 3829.

www.plan.ml.com/zine/tax

©1998 Merrill Lynch, Pierce, Fenner & Smith Incorporated. Member SIPC.

of Odysseus, deathless tales recounted in a masterful, sophisticated version. Caselli, an artist and archaeologist, produced the watercolors.

Papa Tembo by Eric Campbell (Harcourt Brace, $16) Each elephant herd is defined by its own complex kinship structure. This ancient pattern of relationships underlies a riveting novel that pits poachers in Tanzania against wildlife biologists and an indefatigable private investigator.

House by Albert Lorenz with Joy Schleh (Abrams, $17.95) "From a 4,500-year-old Egyptian pyramid to the Mir space station, the house is an articulation in three dimensions of every human hope and fear." This sumptous survey touches on history, architecture and beyond.

Stranger at the Window by Vivien Alcock (Houghton Mifflin, $16) Enmeshed in a conspiracy to hide a child who has entered the country illegally, 11-year-old Leslie learns to rely on newfound friends and inner resources she did not realize she possessed. Set in contemporary London, this account of youngsters living their convictions is imbued with an indomitable force.

52 Days by Camel: My Sahara Adventure by Lawrie Raskin with Deborah Pearson, photographs by Lawrie Raskin (Annick Press, Buffalo, New York, $14.95) Lobbing snowballs in the Atlas Mountains, getting stranded in a sandstorm: real-life adventure relayed by explorer Raskin, who set out for Timbuktu.

The Pirate's Son by Geraldine McCaughrean (Scholastic, $16.95) Setting off from early 18th-century England for the wilds of Madagascar, three young fugitives escape into an exotic, peaceable kingdom by the sea. The heroine emerges as 11-year-old Maud, whose sympathetic apprehension of island culture becomes a key to survival in the face of buccaneers who are blackguards all. Readers ages 8 to 80 will find themselves immersed in this spellbinding yarn.

Memories of Clason Point by Kelly Sonnenfeld (Dutton, $16.99) When the Depression engulfed her Bronx neighborhood of immigrants in 1928, Sonnenfeld, then a young girl, watched as neighbors lost everything. She also saw her proud and generous father turn to bootlegging. Her frank, forgiving memoir documents a tumultuous period from the vantage point of a family set adrift.

The Children's Illustrated Encyclopedia ($39.95); ***The DK Science Encyclopedia*** ($39.95); ***The DK Nature Encyclopedia*** ($29.95) From the innovative publishing house DK, visually stunning reference works at once bold and inviting. The ***Illustrated Encyclopedia*** includes a separate CD-ROM.

Celtic Myths retold by Sam McBratney, illustrated by Stephen Player (Peter Bedrick Books, New York, New York, $22.50) Culled from English, Irish, Scottish and Welsh folklore, a landscape of talking seals, magic stones and preternaturally unerring spears is called forth with subtlety and fire.

To Be a Slave by Julius Lester, illustrated by Tom Feelings (Dial, $20) In 1968, Lester published his groundbreaking compilation of first-person accounts of the experience of bondage. This 30th-anniversary edition of the 1969 Newbery Honor Book is accompanied by new introductions from the author and artist.

Masada written and illustrated by Neil Waldman (Morrow, $16) Over the centuries, the legendary fortress rising from the Negev Desert has become a symbol of heroism in the face of oppression. Waldman's dramatic survey reconstructs the history of the citadel and documents the work of the Israeli archaeologists who unearthed its secrets.

A Drawing in the Sand: A Story of African American Art written and illustrated by Jerry Butler (Zino Press, Madison, Wisconsin, $24.95) This expansive overview introduces artists from Charles Alston to Hale Woodruff and traces Butler's own emergence as a painter.

The Adventures of Sojourner by Susi Trautmann Wunsch (Mikaya, New York, $9.95) On July 4, 1997, a spacecraft parachuted down and landed on Mars. The story of the remote-controlled rover and the researchers who orchestrated that mission is a scientific page-turner.

The Lost Boys of Natinga: A School for Sudan's Young Refugees by Judy Walgren (Houghton Mifflin, $16) In 1989, photojournalist Walgren, on assignment for the *Dallas Morning News*, traveled to Sudan to report on the civil war there. She returned for an extended stay in Natinga, a camp that is a temporary refuge for 2,000 displaced boys, ages 8 to 18. Her reporting on their struggle for survival, and the boys' mission to continue their education even in the midst of war, is an extraordinary document of courage and persistence in the face of nearly insuperable odds.

Kathleen Burke will be reviewing children's titles on a regular basis for the new Website kidsbestbooks.com, coming on-line soon.

Tell Me Something Happy Before I Go To Sleep by Joyce Dunbar, illustrated by Debi Gliori

3 CDs for $4.95 ea.!

No risk! No obligation!

Here's a great chance to try Play, a new hassle-free music club from Columbia House. Play is like no other music club out there! **There are no reply cards to return. No automatic shipments.** And now's the best time to try us out with a special **6 month trial** membership.

Start off by choosing **3 CDs for $4.95 each**, plus shipping and handling, and the benefits begin! We'll send our FREE Music Magazine featuring thousands of selections at special low prices. You'll also enjoy exciting CD samplers of new and upcoming artists, toll-free ordering, friendly customer service, and easy Web site access to over 14,000 selections!

play℠ from columbia house

See for yourself how much you'll enjoy hassle-free trial membership in Play! Choose your 3 CDs now with no further obligation. Call us toll-free or send in the coupon today!

try it!

6 month FREE trial!

"City Of Angels" U2, Alanis Morissette, Goo Goo Dolls, more. (Warner Bros.) **239327**

Sarah McLachlan
Surfacing
(Arista) **215236**

Eagles
Their Greatest Hits 1971-1975
(Asylum) **287003**

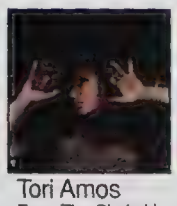
Savage Garden
(Columbia) **186601**

Songs From "Ally McBeal"
feat. Vonda Shepard (550 Music) **244509**

The Carpenters
Love Songs
(A&M) **244582**

All Saints
(London) **243097**

"Grease"
(Polydor) **424721**

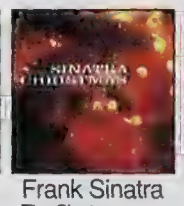


Tori Amos
From The Choirgirl Hotel
(Atlantic) **241455**

Third Eye Blind
(Elektra) **188151**

Backstreet Boys
(Enhanced CD)
(Jive) **244566**

"Godzilla"
The Wallflowers, Puff Daddy feat. Jimmy Page, more. (Sony Music Sndtk) **249342**



Frank Sinatra
The Sinatra Christmas Album
(Reprise) **112946**

Matchbox 20
Yourself Or Someone Like You
(Lava/Atlantic) **168161**

Dixie Chicks
Wide Open Spaces
(Monument) **234757**

Fleetwood Mac
The Dance
(Reprise) **217869**

Brian McKnight
Anytime
(Mercury) **221879**

K-Ci & Jojo
Love Always
(MCA) **213306**

Kenny G Greatest Hits
(Arista) **233627**

Cherry Poppin' Daddies
Zoot Suit Riot...
(Mojo/Universal) **252908**

'N Sync
(RCA) **244202**

Next
Rated Next (Arista) E **233890**

Trisha Yearwood
Songbook: A Collection Of Hits (MCA Nashville) **219436**

Natalie Imbruglia
Left Of The Middle
(RCA) **238329**

Will Smith
Big Willie Style
(Columbia) **231365**

Garth Brooks
Sevens
(Capitol) **232207**

Mariah Carey
Butterfly
(Columbia) **221499**

Elton John
The Big Picture
(Rocket/A&M) **221598**

Gloria Estefan
Gloria!
(Epic) **249359**

Eric Clapton
Pilgrim
(Reprise) **239145**

Shania Twain—The Woman In Me (Mercury/Nashville) **119768**
Michael Bolton—This Is The Time: The Christmas Album (Enhanced CD) (Columbia) **169631**
Jewel—Pieces Of You (Atlantic) **137463**
Creedence Clearwater Revival—Chronicle: The 20 Greatest Hits (Fantasy) **308049**
Mase—Harlem World (Bad Boy/Arista) E **228213**
Jeff Foxworthy—Totally Committed (Warner Bros.) **245498**
Dave Matthews Band—Crash (RCA) **156703**
Billy Joel®—Grt. Hits, Vol. III (Columbia) **219626**
Brian Setzer Orchestra—The Dirty Boogie (Interscope) **253476**
"My Best Friend's Wedding"—Diana King, Tony Bennett, more. (Work) **214759**
Barbra Streisand's Christmas Album (Columbia) **309351**
Paula Cole—This Fire (Imago/Warner Bros.) **170035**
Eve 6 (RCA) **245431**
Elvis Presley—Greatest Jukebox Hits (RCA) **224303**
Erykah Badu—Live (Kedar/Universal) **230870**
Jon B.—Cool Relax (Yab Yum/550 Music) **221853**
Styx—Grt. Hits: Time Stands Still (Remast.) (A&M) **136721**
George Strait—Carrying Your Love With Me (MCA Nashville) **188631**
Enya—Paint The Sky With Stars: Best Of (Reprise) **231316**
Usher—My Way (LaFace) E **224246**
Hanson—Middle Of Nowhere (Mercury) **194480**
Deana Carter—Did I Shave My Legs For This? (Capitol Nashville) **166397**
Marcy Playground (Capitol) **232801**
Green Day—Nimrod (Reprise) **226001**
Pure Disco 2—Barry White, Village People, more. (A&M/Polydor) **242982**
Madonna—The Immaculate Collection (Sire/Warner Bros.) **414557**
Meat Loaf—Bat Out Of Hell (Epic) **279133**
Ben Folds Five—Whatever And Ever Amen (550 Music) **185371**
Wyclef Jean (featuring Refugee Allstars)—The Carnival (Ruffhouse/Columbia) **215244**
Puff Daddy & The Family—No Way Out (Bad Boy/Arista) E **215202**

call now!

To get your CDs right away, call toll-free:

1-800-650-3700

(Credit card orders only.) Dept. BW8

send the coupon!

Mail to: Play from Columbia House,
1400 N. Fruitridge Avenue, Terre Haute, IN 47811

Write the selections you want in the boxes below.

1

2

3

I want to try Play! Send me the 3 CDs indicated, for which I will be billed just $4.95 each, plus shipping and handling. I will receive your Play Music Magazine on a regular basis for 6 months, but there's no obligation to buy anything else! The choice is mine! I understand that there are no reply cards to return, and I'll never receive an automatic shipment. I may cancel my trial membership 6 months after receiving my introductory shipment.

What's your favorite music?
Check only one.

- ☐ SOFT ROCK
- ☐ HARD ROCK
- ☐ METAL
- ☐ R&B
- ☐ JAZZ
- ☐ COUNTRY
- ☐ LIGHT SOUNDS
- ☐ DANCE/POP
- ☐ ALTERNATIVE
- ☐ RAP/HIP HOP

Do you have a telephone? (01) ☐ Yes ☐ No

If yes, write number: (06)
( ) –

Have you bought anything by mail in the past? (27) ☐ Yes ☐ No

How have you paid for mail-order purchases? (check all that apply)
☐ Cash (28) ☐ Credit Card (29)
☐ Check (30) ☐ Money Order (31)

First Name Middle Last Name Age (09)

Address

City State Zip

Note: We reserve the right to request additional information, reject any application or cancel any membership. Canadian members will be serviced from Toronto—some terms may vary. Applicable tax added to all orders. BW8-7Y SG1/F98

E Contains explicit lyrics which may be objectionable to some members.

THE OBJECT

AT HAND

The Vote that Failed

OLD-STYLE BALLOTS CAST ILLEGALLY IN INDIANA HELPED TOPPLE A PRESIDENT—THEN HE HELPED TOPPLE THEM

BY S. J. ACKERMAN

BY THE GAUDY STANDARDS OF 19th-century American political ballots, it's not terribly impressive: a flimsy 3-by-13-inch oblong paper. Except for the typographical flourish at the top, the Smithsonian's 1888 Republican ballot from Hendricks County, Indiana, is a pretty ordinary version of the ballots Americans all over the country used to cast.

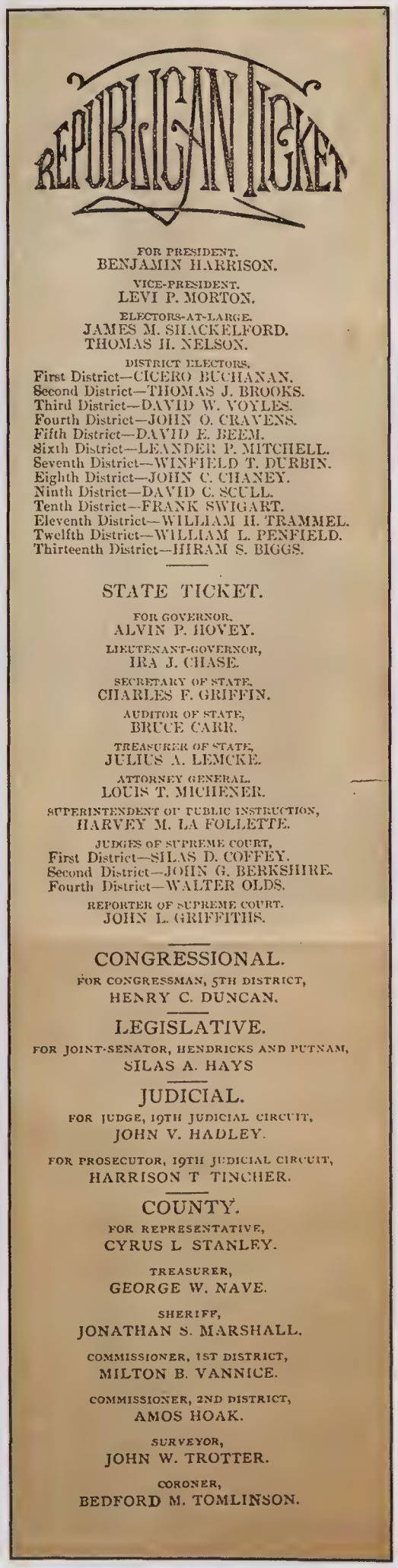
It lists the nominees for President and Vice President, followed by candidates for Indiana's 15 members of the Electoral College—the slightly arcane body that still actually elects our chief executives—and finally, the candidates for state and local offices. Indiana Democrats dealt with comparable tickets, each with its own distinctive graphics and design. Back then many ballots sported a more elaborate mix of slogans, typefaces, pictures and colors than the one shown here. Yet G.O.P. ballots from Indiana in 1888 may be the most significant in American politics. They were distributed wholesale to rascals who were divided into "blocks of five" and paid to cast them illegally. The public reaction to the scandal helped to change electoral history and establish the secret ballot.

In Colonial times Americans mostly declared their votes at the polls, out loud and in public. In 1888, voters in some states, notably Kentucky, still did so. The cerebral Pilgrims wrote their votes, a process that Rhode Islanders streamlined into what was known as a prox (or ticket) printed by each faction. By 1888 each party in each ward of most states produced its own ticket.

This method and the ward bosses who used it thrived because district ballot designs made secrecy impossible. In some states, politicos could buy votes confident of knowing whether the voters stayed bought; they could watch at the polls as their conspicuously marked ballots descended into glass-sided ballot boxes. Sometimes voters handed their votes to election clerks for deposit, inviting further fiddling with the results. Apparently, ballot fraud was so common it developed its own vocabulary. "Colonizers" were groups of bought voters who moved en masse to turn the voting tide in doubtful wards. "Floaters" flitted like honeybees wafting from party to party, casting ballots in response to the highest bidder. "Repeaters" voted early and, sometimes in disguise, often. In Indiana, the absence of any voter registration especially invited such doings.

By September 1888, Indiana Republicans knew that native-son Presidential nominee Benjamin Harrison was in trouble. Harrison was a Hoosier and a high-tariff man, the darling of big business. His party was rich, rich, rich, but to win in the Electoral College where it counted, he needed to carry New York, the home state of President Grover Cleveland, and, for insurance (and honor), his own state.

Both states looked bad for Harrison. "Grover the Good" had won in 1884 despite sneers that he was a draft dodger and a womanizer. Famously charged with having had an illegitimate son several years earlier, the bachelor candidate did not deny it. Cleveland's



REPUBLICAN TICKET

FOR PRESIDENT.
BENJAMIN HARRISON.

VICE-PRESIDENT.
LEVI P. MORTON.

ELECTORS-AT-LARGE.
JAMES M. SHACKELFORD.
THOMAS H. NELSON.

DISTRICT ELECTORS.
First District—CICERO BUCHANAN.
Second District—THOMAS J. BROOKS.
Third District—DAVID W. VOYLES.
Fourth District—JOHN O. CRAVENS.
Fifth District—DAVID E. BEEM.
Sixth District—LEANDER P. MITCHELL.
Seventh District—WINFIELD T. DURBIN.
Eighth District—JOHN C. CHANEY.
Ninth District—DAVID C. SCULL.
Tenth District—FRANK SWIGART.
Eleventh District—WILLIAM H. TRAMMEL.
Twelfth District—WILLIAM L. PENFIELD.
Thirteenth District—HIRAM S. BIGGS.

STATE TICKET.

FOR GOVERNOR.
ALVIN P. HOVEY.

LIEUTENANT-GOVERNOR,
IRA J. CHASE.

SECRETARY OF STATE,
CHARLES F. GRIFFIN.

AUDITOR OF STATE,
BRUCE CARR.

TREASURER OF STATE,
JULIUS A. LEMCKE.

ATTORNEY GENERAL.
LOUIS T. MICHENER.

SUPERINTENDENT OF PUBLIC INSTRUCTION,
HARVEY M. LA FOLLETTE.

JUDGES OF SUPREME COURT,
First District—SILAS D. COFFEY.
Second District—JOHN G. BERKSHIRE.
Fourth District—WALTER OLDS.

REPORTER OF SUPREME COURT.
JOHN L. GRIFFITHS.

CONGRESSIONAL.

FOR CONGRESSMAN, 5TH DISTRICT,
HENRY C. DUNCAN.

LEGISLATIVE.

FOR JOINT-SENATOR, HENDRICKS AND PUTNAM,
SILAS A. HAYS

JUDICIAL.

FOR JUDGE, 19TH JUDICIAL CIRCUIT,
JOHN V. HADLEY.

FOR PROSECUTOR, 19TH JUDICIAL CIRCUIT,
HARRISON T TINCHER.

COUNTY.

FOR REPRESENTATIVE,
CYRUS L STANLEY.

TREASURER,
GEORGE W. NAVE.

SHERIFF,
JONATHAN S. MARSHALL.

COMMISSIONER, 1ST DISTRICT,
MILTON B. VANNICE.

COMMISSIONER, 2ND DISTRICT,
AMOS HOAK.

SURVEYOR,
JOHN W. TROTTER.

CORONER,
BEDFORD M. TOMLINSON.

Republicans helped Harrison win Indiana in 1888 by hiring men to cast ballots illegally.

It goes about a country mile.

(City mileage may vary.)

The longest-distance cordless phone there is.

Panasonic introduces GigaRange, the world's first 2.4 gigahertz digital cordless phone.
Never before has a cordless phone been able to go so far and sound so good.
For more info call 800-211-PANA or visit www.panasonic.com/gigarange

2.4GHz GIGARANGE

Performance may vary depending upon location and atmospheric conditions.

Panasonic®
just slightly ahead of our time®

integrity and reform policies (promoting low tariffs and a civil service overhaul) impressed voters. The Republican campaign taunt "Ma! Ma! Where's my Pa? Gone to the White House, Ha! Ha! Ha!" proved prophetic. Warned at various times that his stand on tariffs would cost him votes—in his day tariffs paid the government's bills (there was no income tax)—Cleveland eventually shot back, "What is the use of being elected or re-elected unless you stand for something?"

Yet one of the most brilliant triumphs of his first term was marrying his pretty 21-year-old ward, Frances Folsom, the daughter of his late law partner. Poised yet unaffected, "Frank" became our first style-setting, superstar First Lady. Everywhere she went, she drew adoring crowds. Women copied her hairdo and, on the mere rumor that she was against them, banished the bustles encumbering their dresses.

Cleveland, with a respectable record and a spectacular First Lady, became the first Democrat renominated for President since 1840. Then the robber barons began flooding Republican coffers with campaign boodle. In New York, Republican National Chairman Matt Quay spent lavishly to buy the support of renegade Democratic bosses in the big cities. The Republicans, it would seem, managed to finagle enough votes to control the election. Harrison was confident he would carry Cleveland's home state, where Cleveland was expected to run well behind his party's victorious gubernatorial nominee. But Indiana still looked like a big problem.

For one thing, the state was already famous for ballot chicanery, which the Republican state platform roundly condemned. Ten years before, a U.S. marshal named W. W. Dudley had rounded up scores of Democrats accused of violating election laws. But at the time the special prosecutor, future Presidential candidate Benjamin Harrison ("Little Ben"), managed to secure only one conviction.

Now, ten years later, "Little Ben" was at the top of one ballot, running for President, with Dudley as treasurer of the Republican National Committee. To Republican delegations trekking to Indianapolis, Harrison made honest voting—"a pure, free ballot . . . the jewel above price"—a leitmotif of his campaign. He exhorted one and all to free Indiana elections "from the taint of suspicion." But Dudley had other ideas. He was buying ballots wholesale. In a fabulously indiscreet circular on Republican National Committee stationery he instructed local leaders in Indiana: "Divide the floaters into blocks of five, and put a trusted man with necessary funds in charge," being sure to "make him responsible that none get away and all vote our ticket."

Near the campaign's close a suspicious Indiana railway postal agent intercepted one of the incriminating missives. Newspaper headlines followed. Dudley and Quay rallied to blast the Democratic "forgery," and Dudley slapped libel suits on the newspapers that printed it. The vote buying rolled on. Party faithful even brought voters over from Pennsylvania, which was safely in Harrison's column. With the whole nation watching, Dudley brazenly bought blocks of votes in Indiana. But instead of going to prison, where his personal knowledge of Dudley's doings could have put him, Harrison went to Washington.

As President he boosted the already staggering protective tariff and depleted the U.S. Treasury with an orgy of pork barrel boondoggles approved by what Democrats called his Billion Dollar Congress. He turned Cleveland's civil service into a joke. Meanwhile, in defeat Cleveland flourished. He practiced law in New York. Frank gave birth to "Baby Ruth," a celebrated tyke whose name was bequeathed to a candy bar. Cleveland was content, save for a nagging sense of duty about balloting. Normally he dodged banquets and barbecues requesting "a few words," but when the Merchants' Association of Boston offered a forum, he rose to the occasion. In 1888, the city of Louisville, Kentucky, and the Commonwealth of Massachusetts had adopted the secret ballot system of New South Wales, then a territory in Australia. In a single year, 1889, nine states adopted the Australian method, including Indiana. There was a chance that the reform would catch on nationwide.

The most celebrated martyr to ballot fraud and vote buying, Cleveland lashed out against the "vile, unsavory" forms of self-interest that "fatten upon corruption and debauched suffrage." He called upon good citizens everywhere, to rise above "lethargy and indifference," to "restore the purity of their suffrage."

And they did. A ballot-reform landslide swamped the nation's legislatures. By the 1892 elections, citizens in 38 states voted by secret ballot. That year, they also returned Grover Cleveland and Frank to the White House.

In the 19th century, glass-sided ballot boxes like the one above, from Maryland, helped politicos see if bought voters stayed bought.

They say in thirty years
a burger & fries could cost $16,
a vacation $12,500,
and a basic car $65,000.
No problem.
You'll eat in. You won't drive.
And you won't go anywhere.
©1998 Teachers Insurance and Annuity Association/College Retirement Equities Fund. 730 Third Avenue, New York, NY

TIAA-CREF.

Proven

Solutions

To Last

a Lifetime.

Granted, sitting around the house may not be your idea of the perfect retirement. But what's your choice when inflation is slowly but surely eroding the value of your nest egg? Talk to TIAA-CREF. We offer mutual funds, IRAs, investment and insurance plans, and personal annuities that can help you outpace inflation and build the rewarding future you deserve. Maybe that's why we've become the largest retirement system in the world. For more complete information, including charges and expenses, call 800 226-0147 for your free Personal Investing Kit. It contains prospectuses for our variable annuities and mutual funds. Please read them carefully before you invest or send money. TIAA-CREF. Financial services exclusively for people in education and research.

www.tiaa-cref.org

TIAA CREF

Ensuring the future
for those who shape it.℠

Close Calls in Life and Art

SMITHSONIAN HIGHLIGHTS

IT SHOULD COME AS NO SURPRISE THAT AS a child, portraitist Chuck Close studied the illustrated covers of magazines with a magnifying glass. He says he just wanted to see how the paintings were made, but the proclivity to magnify images apparently never left him.

Close has spent a 30-year career portraying the human face on a massive scale—like the 7-by-8-foot 1992 portrait *John*, shown above, one of 80 works in a major retrospective from the Museum of Modern Art in New York, on display at the Hirshhorn Museum & Sculpture Garden through January 10.

Close's approach has not varied much during his career: starting with a Polaroid mug shot, he imposes a grid, then re-creates the face square by square. But his style has changed dramatically—from a precise photo-realism to the surreal playfulness of his canvases today.

His work had just begun to take on that whimsical quality when, in 1988, a blood vessel ruptured in his spinal cord, leaving him nearly paralyzed. For months it wasn't clear whether he would paint again. But soon he was strapping paintbrushes to his wrists, and using a motorized easel to lift and turn his canvases. The art that emerged is, perhaps, the most joyful Close has ever created, with each tile within his portraits containing a luscious world of color and expression all its own.

—Minna Morse

Sure Signs That The #1 Ingredient In

Our Dog Food Is Beef:

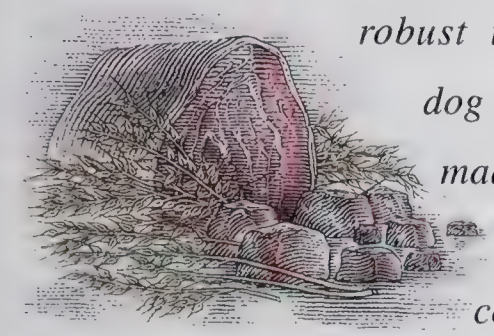
1) The Ingredient Label Says So.

2) It Tastes Like It

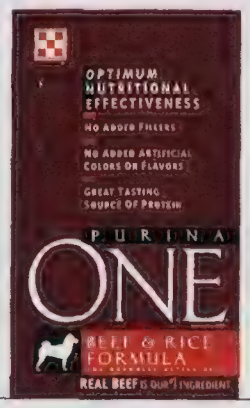
(Or So Your Dog Says).

3) Your Dog *Asks You To Pass The* *Steak Sauce.*

There's probably nothing your dog would rather find in his bowl at dinnertime than real beef. The fact is, dogs have always loved its hearty, robust taste. But many dry dog foods claiming to be made with real beef have typically listed corn as their first ingredient. Not Purina O.N.E.®



Purina O.N.E. brand Beef & Rice Formula has the real beef dogs love as its #1 ingredient.



In fact, we use more beef in our dog food than any other ingredient. And since beef is one of the best sources of protein there is, Purina O.N.E. can help supply your dog with the nutrients he needs to keep him healthy. With all the beef that's in our Beef & Rice Formula, don't be surprised if your dog asks you to bring him a bottle of steak sauce. But just try not to laugh if he mispronounces Worcestershire.

For more information or to receive a special offer, call 1-800-787-0078, extension 2029.

©1998 Ralston Purina Company

www.purina.com

PURINA O.N.E.® SECOND TO NONE™

SMITHSONIAN

HIGHLIGHTS

Tiger, Tiger . . .

The National Museum of Natural History launches a new, permanent diorama on November 13, describing efforts to ensure that the Bengal tiger—one of the world's most endangered animals—continues "burning bright" in the wild.

Tigers! conveys the commitment of scientists studying the big cats, conservationists working to preserve crucial habitat, and Indian and Nepalese communities learning to live with these graceful predators. The exhibition is presented in conjunction with the National Zoological Park's new *Great Cats* hill, featuring *Tiger Tracks*, an interpretive trail for children. Both exhibitions are being sponsored by the Save the Tiger Fund, in partnership with Exxon.

A new NMNH exhibition documents efforts to save Bengal tigers in the wild.

JOE MCDONALD/ANIMALS ANIMALS

Smithsonian Website

SMITHSONIANMAG.SI.EDU

Another place to start finding out about the many exhibitions, events, publications, programs and activities of the Smithsonian is at our Web address, smithsonianmag.si.edu. There you will find an on-line version of the *Highlights Calendar* with links to the many pages of the Smithsonian Institution Website.

Exhibitions, Events

ARTHUR M. SACKLER GALLERY

Roy Lichtenstein: Landscapes in the

Lincoln Navigator takes luxury deep into the great outdoors. With room for seven in three rows of leather-trimmed seats. Plus rich wood accents. To learn

Chinese Style (November 8 through February 7) An exhibition of paintings by the American pop artist, shown here with six of the Chinese works that inspired him.

FREER GALLERY OF ART

Charles Lang Freer and Egypt Objects from the New Kingdom (1550 to 1070 B.C.) to the Roman period (30 B.C. to A.D. 395) collected by the founder of the gallery.

NATIONAL MUSEUM OF AFRICAN ART

South Africa 1936-1949: Photographs by Constance Stuart Larrabee (through February 28) Seventy-nine black-and-white photographs that capture a decisive period in South Africa's turbulent history.

NATIONAL PORTRAIT GALLERY

Philippe Halsman: A Retrospective (November 6 through February 7) Some 80 works from the portrait photographer, focusing on those published in popular magazines from the 1930s to the 1970s.

Andy Warhol's Flash—November 22 (through November 29) The artist's 14-print portfolio, with words from the press, about the assassination of John F. Kennedy 35 years ago this month. A special lecture will be offered at noon on November 22 by the show's curator.

Theodore Roosevelt: Icon of the American Century (through February 7) Paintings, photographs, political cartoons and memorabilia of the rough-riding 26th President.

NATIONAL AIR AND SPACE MUSEUM

Star Wars: The Magic of Myth (through January 31) For information on limited free same-day passes, call 202-786-2122. Advance tickets can be purchased through ProTix (800-529-2440).

COOPER-HEWITT, NATIONAL DESIGN MUSEUM

[NEW YORK CITY]

Unlimited By Design (November 17 through March 21) Features 150 examples of universal design, ranging from environments (like kitchens and play spaces) to services and products, each designed to enhance access for people of all ages and levels of ability.

NATIONAL MUSEUM OF AMERICAN HISTORY

A Visual Journey: Photographs by Lisa Law 1964-1971 (through March) Documents the sweeping cultural and political changes of the 1960s.

A Collector's Vision of Puerto Rico (through May) Items from Teodoro's 3,200-object collection of festive costumes, jewelry, carnival masks and more from Puerto Rico.

Frontier Photographer: Edward S. Curtis (through September 27) This exhibition, in the Smithsonian Institution

more about the most powerful luxury SUV on the continent, call 1 800 446-8888, visit www.lincolnvehicles.com or see an authorized Lincoln Navigator dealer.
Lincoln Navigator. What a luxury [ ] should be.

Libraries Gallery, features images from Edward Curtis' landmark 20-volume study *The North American Indian*, published in 1900.

NATIONAL MUSEUM OF NATURAL HISTORY

Pomo Indian Basket Weavers: Their Baskets and the Art Market (through January 18) Exhibition features images and examples of turn-of-the-century basketry by the Pomo Indians of Northern California.

ANACOSTIA MUSEUM

Eyewinkers, Tumbleturds, and *Candlebugs: The Art of Elizabeth Talford Scott* (November 1 through January 2) Examples of this innovative quilter's vibrant work, colorful patchworks that she adorns with bones, stones and other unexpected materials.
Classic Black (November 1 through April 30) African-American ballet dancers from the 1930s to the '60s.

ARTS & INDUSTRIES BUILDING

Communion of the Spirits: African American Quilters, Preservers and Their Stories (November 19 through March 30) An exhibition of photographs explores widely varying quilting traditions used by quilters and fabric artists.

HEYE CENTER NATIONAL MUSEUM OF THE AMERICAN INDIAN
[NEW YORK CITY]

The Art of Being Kuna: Layers of Meaning Among the Kuna of Panama (through March 21) Three hundred works of artisanship, including jewelry, baskets, and *molas*—richly decorated blouses for which the Kuna are world-renowned.

NATIONAL MUSEUM OF AMERICAN ART

Art of the Gold Rush (through March 7) Seventy paintings, watercolors and drawings re-create the 150-year-old chapter in our nation's history.

RENWICK GALLERY, NMAA

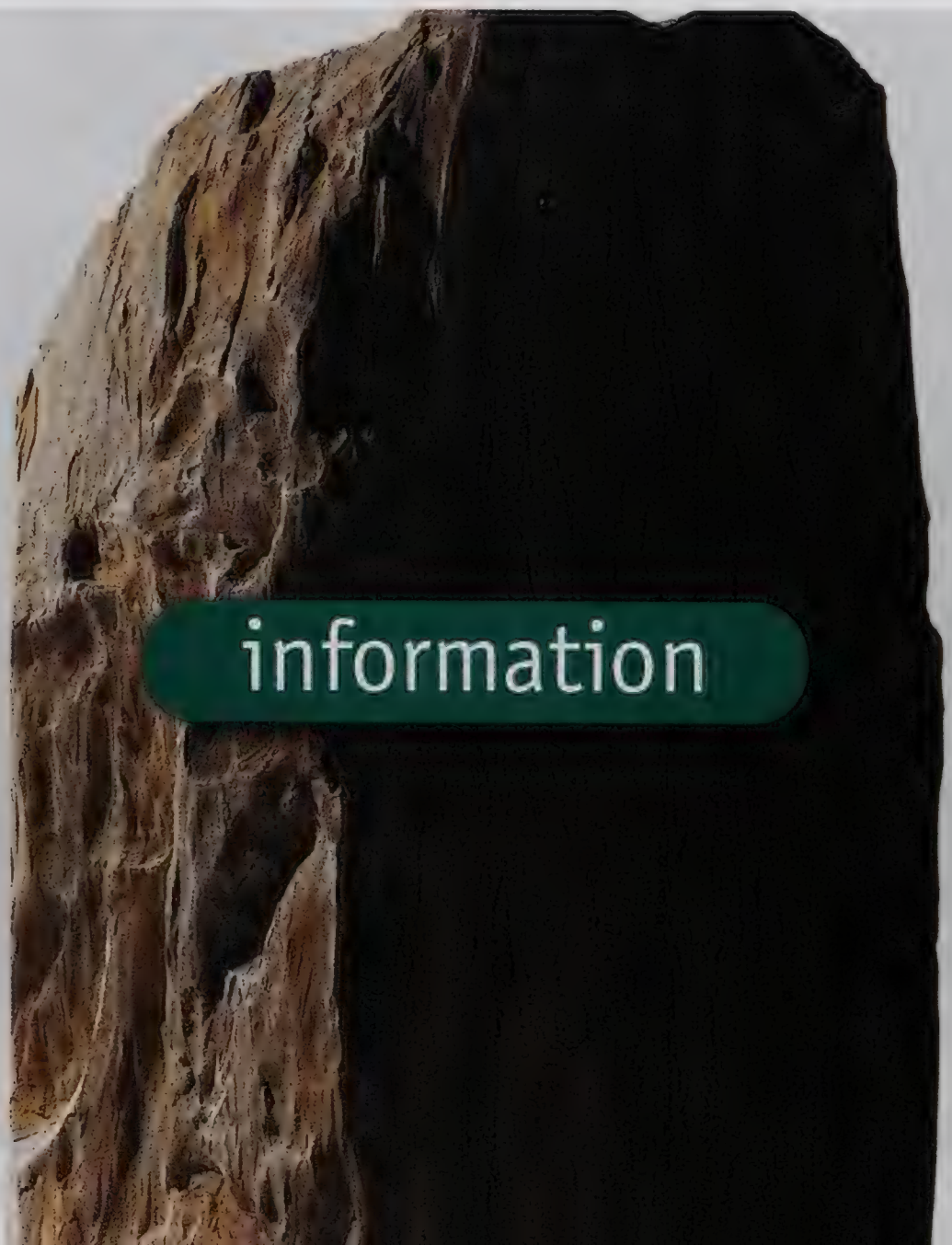
Daniel Brush: Gold without Boundaries (through January 10) The first exhibition to showcase the modern goldsmith's unparalleled work.

NATIONAL POSTAL MUSEUM
[NEAR UNION STATION ON CAPITOL HILL]

Mayhem By Mail (through December) Explores three types of crime investigated by U.S. Postal Inspectors.
As Precious as Gold The importance of letters from home during the last great gold rush of the 19th century, in Alaska and the Klondike.

EXHIBITION CATALOGUES

Catalogues currently available include:
Chuck Close ($24.95 paper, $49.50 cloth)
Art of the Gold Rush ($24.95 paper, $50 cloth)
Theodore Roosevelt: Icon of the American Century ($22.95 paper)
Philippe Halsman: A Retrospective ($75 cloth)



Encyclopædia Britannica
Since 1768 (800)747-8503

Silver and Gold: Photographs of the Gold Rush ($29.95 paper, $59.95 cloth) To order, send check or money order to Smithsonian Museum Shops, 8308 Cinder Bed Road, Lorton, Virginia 22079. Include 15 percent of purchase for postage and handling (minimum charge, $4.50).

THE SMITHSONIAN ASSOCIATES RESIDENT ASSOCIATES PROGRAM

For information on the program's many lectures, concerts and other events, call 202-357-3030 or visit www.si.edu/tsa/rap.

SMITHSONIAN PRODUCTIONS

Visit Smithsonian Productions' Website for information about their radio programs and video products: www.si.edu/sp. Currently being broadcast is "Remembering Slavery," a two-part documentary hosted by Tonea Stewart. Includes recordings of first-person accounts by former slaves, and readings of their words by Debbie Allen, James Earl Jones and others. Check public radio listings in your area.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

Not coming to Washington? The Smithsonian may be coming to you! SITES circulates exhibitions of all shapes, sizes and subject matter to more than 250 venues each year, in cities throughout the United States and abroad. To sponsor a show in your community, write to: SITES, Smithsonian Institution, Washington, DC 20560. A listing of current exhibitions and additional information is available at www.si.edu/sites.

Planning a Smithsonian Visit?

THE CASTLE—INFORMATION CENTER

Begin your visit at the Smithsonian Information Center's Associates' Reception Desk—open 9 A.M.-4 P.M. daily—in the Castle. Special materials and information on exhibitions, activities and dining await you there. Learn what's new at the Smithsonian and other capital attractions—videos, touch screens, maps and more.

Smithsonian museums are generally open 10 A.M.-5:30 P.M. daily, except December 25. Receive a free Associates' planning packet. Write to Smithsonian Information, Smithsonian Institution, Washington, D.C. 20560, or call 202-357-2700 (voice) or 202-357-1729 (TTY), 9 A.M.-5 P.M., Monday-Friday; 10 A.M.-4 P.M., Saturday-Sunday. Note: Parking is limited; Metrorail (subway) is convenient to all museums.

BRETT FROOMER:
SHOOTING KODAK ELITE
CHROME 200 FILM

Brett Froomer

125 AT F8.5 WARM POLARIZER

KODAK SELECT SERIES FILMS

THE NEW KODAK ELITE 200 HAS EXCELLENT COLOR. I LOVE THE SATURATION IN THIS INCREDIBLE BLUE SKY. IT MAKES FOR A PUNCHY CHROME, WHICH IS CERTAINLY MORE INTERESTING TO LOOK AT.

THE SKIN TONES HOLD TRUE EVEN AGAINST A SKY THAT'S REALLY BRIGHT.

EVEN THOUGH IT'S A FULL STOP FASTER THAN CONVENTIONAL TRANSPARENCY FILMS—AND THAT'S A HUGE ASSET—IT'S STILL SHARP. YOU CAN SEE THAT IN THE CAPE.

I think photographers are part scientists, part artists. The scientist is always asking, "What can I bring forward or push back to get what I want in the shot?" So everything has to do with control and direction and making choices.

But the artist is wondering, "How can I create an emotion?" With this shot, I wanted to create a story with some emotional appeal. And that's when you make a conscious choice about film. I wanted a film with the color saturated, but I wanted good-looking, natural skin tones too.

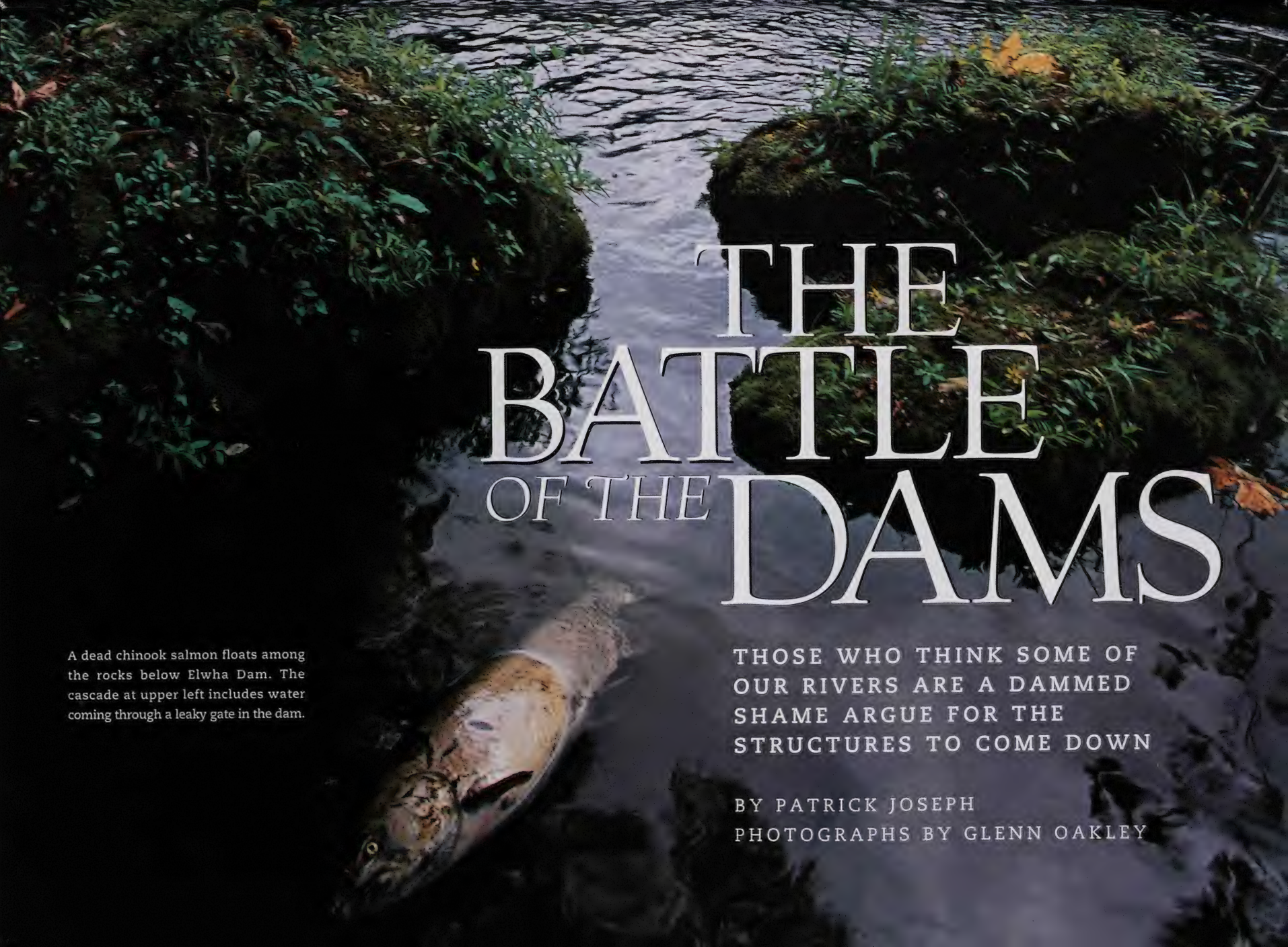
Alabama, Feb. 14

KODAK ELITE 200 HAS THE FINEST GRAIN OF ANY 200-SPEED CONSUMER SLIDE FILM. WWW.KODAK.COM

THE FILMS YOU NEED FOR THE RESULTS YOU WANT.

TAKE PICTURES. FURTHER.™

© Eastman Kodak Company 1998. Kodak, Kodak Select, Kodachrome, Elite, Royal, Gold, and Take Pictures. Further. are trademarks.



THE BATTLE OF THE DAMS

A dead chinook salmon floats among the rocks below Elwha Dam. The cascade at upper left includes water coming through a leaky gate in the dam.

THOSE WHO THINK SOME OF OUR RIVERS ARE A DAMMED SHAME ARGUE FOR THE STRUCTURES TO COME DOWN

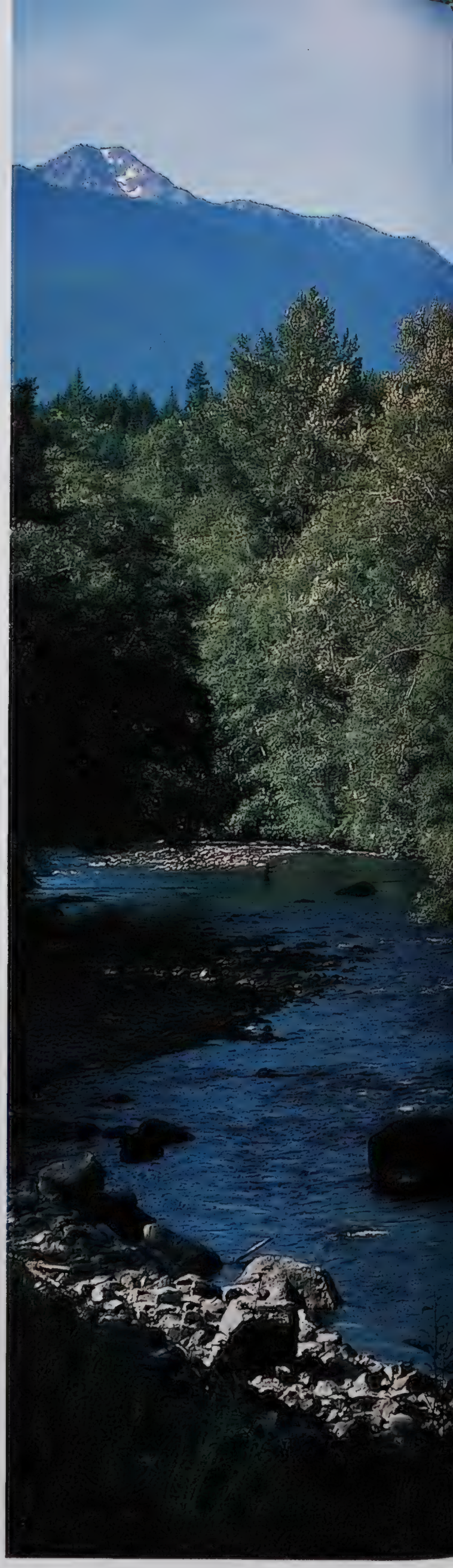
BY PATRICK JOSEPH
PHOTOGRAPHS BY GLENN OAKLEY

IN THE SHADOW OF WASHINGTON'S OLYMPIC MOUNTAINS, Elwha Dam sits, mossy and ponderous, its stairstep foundation deeply pitted by erosion. Finished in 1912 and already rebuilt by 1914, after it collapsed, the structure looks much older and yet, somehow modern. It's a jungle ruin with Machine Age appendages: giant penstocks feeding into a powerhouse, electrical wires crackling in the drizzle.

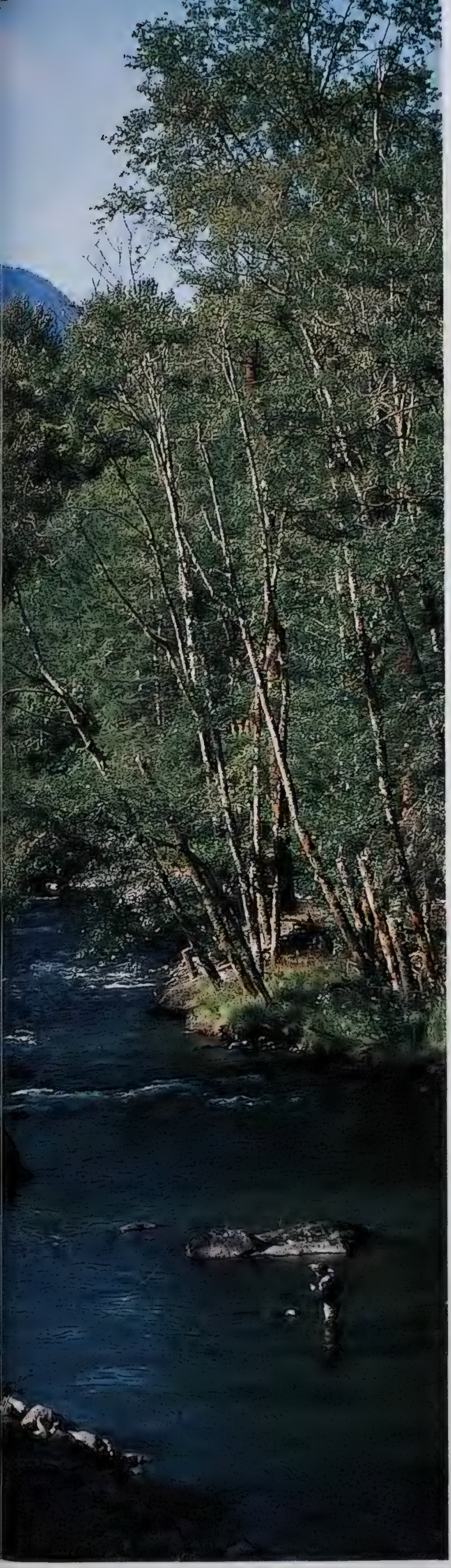
Pacing atop the dam, Buck Adamire, a big man in dungarees and a lumberjack plaid shirt, talks distractedly about the history of the place, pointing out features both bygone and extant. "Over there was the old hatchery building," he says, indicating an overgrown hillside, "and there used to be a bridge right up there."

Stopping to hook a hand through the chain link, Adamire suddenly peers down into the river as it reforms below us. Catch the light just right, he tells me, and you can make out some fish. Sure enough, there they are: a few shadowy forms—chinook salmon and steelhead trout—home from sea and nosing around at this dead end just five miles upstream from where the river, flowing green and milky with glacial flour, enters the Strait of Juan de Fuca.

It's a scene that has repeated itself, albeit in diminishing numbers, every year since the dam was built. Contrary to the laws of that time, the structure did not include fish passage. Hatchery programs have managed to keep harvestable numbers of some fish in the river, but the remaining stocks—both wild and artificially propagated—are in steady decline. The few fish below us are a mere remnant of the river's former bounty. Whereas an estimated 380,000 adult salmon and steelhead annually re-



Beatrice Charles of the Klallam Tribe still resents the loss of the salmon, "our life." Right: Fishermen work a free-flowing stretch of the Elwha River between dams.



Buck Adamire fought for years to keep the reservoirs, but is willing to see them removed if it means fish will return to the upper stretches of the river.

turned to the Elwha before any dam was built, today that number has fallen below 3,000.

While not among the West's storied rivers, the pre-dam Elwha did have its claims to fame. The river was once host to all ten of the Pacific Northwest's native anadromous salmon and trout species—that is, fish that spawn and are reared in fresh water but spend most of their life in the ocean. It also boasted the largest salmon on record: legendary 100-pound chinooks. Today, salmon that size are unheard of here, and at least two native Elwha salmon runs are extinct. According to Pat Crain, fisheries manager for the Lower Elwha Klallam Tribe, others may soon follow. "We're in a race against time with chinook. We're in a race with time with chum. And we lost with pink salmon," he says grimly. "Last year we counted 50 in the river. In 1977, there were 50,000."

The Elwha is not alone in defeat. One hundred and six native salmon and trout stocks in California, Oregon, Washington and Idaho are now extinct. Another 214 are at risk of vanishing. While the causes of the decline vary, dams rank high on the list of contributing factors. That realization has helped drive the decision, pending government funding, to "restore" the Elwha by removing 105-foot-high Elwha Dam and its upstream counterpart, 210-foot Glines Canyon Dam.

It's a proposal that Buck Adamire, former president of a group called Rescue Elwha Area Lakes, or REAL, fought against for years. A logger by trade and a trapper by avocation, Adamire's resistance to removal of the dams has complex roots, including a genuine affection for the reservoirs. Looking out across the emerald reflection of Lake Aldwell, he says simply, "I love it." Adamire has lately relented, however. "If the dams have got to go," he says, tugging a loose-fitting ball cap down over his thinning hair, "then OK, let's do it. Let's get fish back in the upper river. But I'm through with all the controversy."

Of course, the idea of removing dams is nothing if not controversial. Only recently has the notion been discussed outside those environmentalist enclaves so often consigned to the "lunatic fringe." For many, no matter what their views, the mere

mention of it calls to mind Edward Abbey's novel *The Monkey Wrench Gang*, its merry band of saboteurs hell-bent on blowing up Arizona's 710-foot-tall Glen Canyon Dam. So, when Congress held a joint hearing in 1997 to consider a proposal by the Sierra Club and the Glen Canyon Institute to pull the plug on that very dam, the news spread like floodwaters.

Not that Congress was keen on the idea. To the contrary, many of the legislators who spoke at the hearing did not conceal their contempt. Senator Ben Nighthorse Campbell of Colorado declared the notion a "certifiable nut idea," while Representative Chris Cannon of Utah likened it to removing the Statue of Liberty and reclaiming Liberty Island. But in a *New York Times* op-ed piece, a senior vice president of the National Audubon Society, Daniel Beard, declared the event momentous nonetheless. "There was no mistaking the intent of the hearing," he wrote. "The Western lawmakers on the panel wanted to use the forum to embarrass those who support restoration of the canyon. . . . But by holding the hearing in the first place, the panel gave legitimacy to the option of removing dams because it tacitly admitted that dams are not permanent fixtures of the landscape. They are there because we made a political decision to build them. And they won't last forever." Considering that Beard was a recent commissioner of the federal Bureau of Reclamation—the agency that built and operates Glen Canyon Dam—the statement was nothing short of revolutionary.

Indeed, even as China endeavors to build the world's largest dam on the Yangtze River, there are indications that the United States may be moving in the opposite direction. There is little argument that the age of big dam projects in America is over. The best sites have already been developed and the handful of new proposals under serious consideration face significant roadblocks, from high costs to strict environmental laws. At the same time, a number of sizable dams are being considered for removal, and many small ones have already come out. In August 1996, a controversial dam on the Clyde River in Vermont was dynamited after a spring freshet washed out an embankment. Quaker Neck Dam, on the Neuse River in North Carolina, was removed last December after blocking the passage of striped bass, shad and other migratory fish for nearly half a century. And finding that removal could be one-third to one-fifth the cost of repairing obsolete dams, Wisconsin has quietly pulled a number of aging structures from the state's rivers for economic as well as environmental and safety reasons.

Certainly, the latter is a looming concern. A quarter of the dams in the country are at least 50 years old, and many are in dire need of repair. Nearly one in ten of the nation's dams are rated as high-hazard, meaning failure would likely result in loss of life (SMITHSONIAN, April 1978). Elwha Dam is one such structure, and like many dams, it leaks. As much as 450 gallons of water per second bubbles up from the patchwork foundation, a reminder of the catastrophic breach that emptied the reservoir on Halloween night 1912.

Beatrice Charles is recalling stories handed down from the long-ago disaster at her home near the river's mouth. An elder in the Lower Elwha band of the Klallam Tribe, Aunty Bea, as she is known on the reservation, sits in front of a pink-curtained window looking out upon the broad green V of the Elwha Valley and the craggy Olympic peaks beyond. "Nobody warned the Indians that the water was coming," she says with hardly a trace of bitterness. Alarmed by the sound of snapping tree trunks, her family simply fled to high ground. Miraculously, no one was killed.

"In the morning," she says, laughing a little, "they were pulling chickens out of the trees."

As unorthodox as it sounds now, Elwha Dam was not built upon bedrock, so the river was able to channel under the dam's bottom, eventually blowing out the foundation to a depth of 80 feet. By one account, the reservoir, which had taken two weeks to fill, took just two hours to empty.

The dam has been deemed safe by government inspectors, even though the leaks are plainly visible. Pointing to a boil of water at the base of the dam, Adamire says, "You can see for yourself where it comes through. So, I guess for public safety reasons, if nothing else, it oughta come down."

For Aunty Bea, the reasons go deeper. Able to laugh at the flood that nearly swept away her family, she waxes grave when the subject turns to the issue of declining salmon. "The salmon was our food," she says, with a righteousness that seems to inflate her small stature. "The salmon was our culture. The salmon was our life."

On the Elwha River and elsewhere, the debate has focused mainly on the environmental consequences of dams. While dams have been touted in the name of water conservation and clean, renewable energy, environmentalists have long challenged the claim that dams are "green" technology. The deleterious ecological impacts of dams, they insist, have been profound. Rivers that once flowed according to the seasons are now regulated for human needs—namely, power,

Seen through rock sculpted by water, Arizona's Glen Canyon Dam holds back the waters of Lake Powell. The towers to the left of the dam carry transmission lines.

Lake Powell's convoluted shoreline is hundreds of miles long. The lake is a popular recreation site; the white rectangles on the water are houseboats.

irrigation and flood control—causing unnatural fluctuations in water levels that confound many of the organisms adapted to the old rhythms. Additionally, reservoirs alter the thermal characteristics of rivers, with unpredictable consequences. Solar-heated water taken from the tops of reservoirs or cold water drawn from deep below the surface may make dammed rivers less livable for some species and better for others. Dams also change the character of rivers by trapping sediments and debris that would otherwise flow freely downstream: charged with excess energy, sediment-poor rivers dig deeper channels or cut away at their banks. In turn, estuaries, beaches and wetlands shrink, altering the landscape and diminishing wildlife habitat.

Dam removal is not a black-and-white issue. Will Graf, a fluvial geomorphologist at Arizona State University, is not alone in hesitating to condemn dams. "To argue all of a sudden that all dams are bad is, I think, revisionist history," he says. Dams provide the country with 10 percent of its electricity and about 50 percent of its renewable energy. Graf, who is investigating the downstream impacts of high dams, thinks the shift in attitudes toward dams reflects a larger social change in the United States in which development of natural resources is weighed against protection of the environment. As the nation looks for ways to balance those competing needs, "dam removal is simply a reasonable and feasible alternative," says Margaret Bowman, director of hydropower programs at American Rivers. "Clearly, the dams that are the first to come down will be the ones that don't make sense anymore."

To many, Edwards Dam, on the Kennebec River in Maine, is a perfect example of such a dam. The 160-year-old, 30-foot-tall, timber-and-concrete structure today generates only 0.1 percent of Maine's total power supply while blocking the river below the so-called head-of-tide, in the part of the river still subject to the ocean's diurnal tug. Ten species of migratory fish, including alewife and shad, Atlantic salmon and snub-nosed sturgeon, are thus cut off from 17 miles of preferred spawning habitat. In light of these facts, the Federal Energy Regulatory Commission (FERC), which oversees more than 2,600 nonfederal hydroelectric dams, denied a license for the continued operation of Edwards and ordered the structure removed. The decision marked the first time that the commission had taken such a step. "No dam owner has ever relinquished a productive hydro project willingly," explains Mark Isaacson, vice president of Edwards Manufacturing Company, which runs the dam. "They're simply too valuable." He stands next to the powerhouse, the old turbines churn-

As I See It, #31 in a series
Sheila Metzner
"I Love It When You Knead Me"
Color Photography/Fresson Print

THE BOLD LOOK
OF KOHLER

Sounds good? It feels better. Our unique Vigora™ whirlpool delivers the supreme luxury of a blissful, mind-mending neck and back massage. Simply slide in and let those strategically placed jets (there are even two hidden in the pillow) do their stuff. Tension? Never heard of it. See the Yellow Pages for a KOHLER® Registered Showroom, or call 1-800-4-KOHLER, ext.GCY to order product literature. www.kohlerco.com

©1997 by Kohler Co. All rights reserved.

Lush, natural scenes like this along the lower Ocklawaha River are what Florida's governor and environmental groups hope to restore by taking out a dam.

ing noisily inside. "And the reason is easy to understand: after the initial capital investment, the costs of operation are relatively low—three or four employees, simple upkeep, and the water flowing over the dam is free."

That's an attitude that irks Steve Brooke, project coordinator of the Kennebec Coalition, a group of environmental and angling organizations that led the fight to decommission the dam. A slight, congenial man who some say deserves singular credit for the outcome of the Edwards case, Brooke has anchored his Boston Whaler below the dam and looks across the tailwater. He disagrees that the water running beneath us is free. "They're making a profit off our river while disregarding the effect they have on the resource. Is that the way we want to manage our rivers?"

The problem of who pays for the cost of removal is indeed a thorny one. Unlike nuclear power plants, whose operators are required to set aside funds to pay for decommissioning, dams were built on the assumption of permanence. Observers like Margaret Bowman worry that as dams become uneconomical, many owners may simply walk away from the projects, leaving the public to deal with the problem. "Deadbeat dams," she calls them.

On the Kennebec, a settlement was reached in May whereby other industries on the river agreed to put up the $7.5 million required for demolition of Edwards Dam and associated restoration measures in exchange for certain concessions. Owners of dams upstream, for instance, were granted a delay in installing fish passages. For its part, Edwards Manufacturing, no longer saddled with removal costs, agreed to hand over the site to the state.

Whether that arrangement can serve as a model for resolving other such conflicts remains to be seen. The Elwha River, for example, presents a very different scenario. There, ostensibly to resolve a dispute between the U.S. Department of the Interior and FERC over the licensing of Glines Canyon Dam (located within Olympic National Park), Congress enacted legislation in 1992 to restore the Elwha ecosystem. When the Department of the Interior later endorsed removal of both Elwha and Glines Canyon dams as its preferred alternative for restoration, many thought it was a fait accompli. As yet, however, not a single dollar has been made available for demolition.

Fearing that removal of the Elwha dams would set a dangerous precedent for the hydropower-dependent

dinner for 37, chez marcella: $2,416

one happy 50th birthday card: $1.95

one leopard-print, peekaboo nightie: $45

still being able to make her blush:

priceless

Platinum MasterCard® has a high spending limit
for the things that matter.

there are some things money can't buy.
for everything else there's MasterCard.™

©1998 MasterCard International Incorporated

www.mastercard.com

Northwest, Senator Slade Gorton of Washington has conditioned his support on guarantees that no dams on the Snake and Columbia river systems would be removed or significantly altered without congressional approval. As chairman of the Interior Appropriations subcommittee, Gorton is a key figure in the future of the Elwha dams.

A plan to restore Florida's Ocklawaha River, a 78-mile-long tributary to the St. Johns River, has become similarly politicized. Even though Governor Lawton Chiles and the Florida Cabinet (a board of top elected officials) voted unanimously in 1992 to remove Rodman Dam from the river, no money has been forthcoming. Some put the blame on State Senator George Kirkpatrick of Gainesville, who helped defeat an appropriations measure in March that would have set aside $5 million to initiate restoration. A deadline is looming, however. Part of the dam and reservoir are on U.S. Forest Service land, and the permit allowing that use expires December 31. The dam operators will then be compelled to remove the dam unless the Forest Service issues another permit.

In the meantime, Kirkpatrick's colleagues passed a bill renaming the structure after him. Kirkpatrick (formerly Rodman) Dam has long known controversy. Activist Marjorie Carr, founder of Florida Defenders of the Environment, first led the fight against it in the early 1960s. The dam and reservoir are a vestige of a proposed cross-state barge canal abandoned by the Army Corps of Engineers in 1977. And although today the dam serves no real function, the reservoir does boast decent bass fishing. "Of course, so does the river," notes David White at Florida Defenders of the Environment. To White, a lawyer with a background in wildlife biology, the 9,000-acre reservoir is an abhorrence, "a weed-choked, declining ecosystem smack in the middle of a beautiful river." Touring the reservoir in his bass boat, it's hard to argue with that assessment. Here and there as we navigate the drowned river channel, rotting logs float like corpses amid the hydrilla. The trunks of dying cabbage palms and cypresses stand like so many listing power poles, the last holdouts of a moribund forest.

State Senator George Kirkpatrick prefers the Ocklawaha's reservoir, above the dam; stumps, snags, floating logs and hydrilla patches make it a fisherman's dream.

The river, by contrast, is teeming. All along the Ocklawaha's serpentine course, a profusion of trees drape the riverbanks. Ash and elm commingle with palm and cypress, hammock gives way to floodplain forest. As we round each bend, turtles and alligators slide off logs, fish pop the surface. Anglers ply the tea-colored water. The bird life is rich and varied. At one point, White kills the engine and hands me the binoculars. "Swallow-tailed kite," he says proudly, pointing to the bird wheeling overhead. "Now that's the kind of critter we're protecting habitat for."

Not everyone sees the river and reservoir with the same eyes, however. Mike Murtha, a legislative aide to Senator Kirkpatrick, speaks of the reservoir as a beautiful place and a vibrant ecosystem. For him, all the attention paid to a small Florida river is something of a mystery. "Let's face it, we're not talking about the Yellowstone here," he says. "We're not even talking about the Suwannee. We're talking about the Ocklawaha." Still, he says he respects the positions of those with different views. "They had something they loved back in the Sixties and some bastards came and took it away from them. Well, now we have something that we love and some bastards are trying to take it away from us."

Two thousand miles away on the Colorado River, the same tensions—between reservoirs and rivers, man-

aged ecosystem and wilderness—are at work. Say the words "raging river" and people will undoubtedly think of the Colorado, surging on its muddy course through the Grand Canyon. One fact about the river, however, suggests an altogether different reality: dammed and diverted at more than 30 points, the Colorado no longer reaches the sea except in especially wet years. The rest of the time it ends as a few salty puddles evaporating in the Sonoran Desert, leaving the once-vast wetlands of the Colorado River delta to wither and die. For David Brower, the former executive director of the Sierra Club, that alone is reason enough to drain Lake Powell, the second-largest man-made lake in America. "Think of what that water could do for the area," he says wistfully. "And all you have to do is let it flow downstream."

His shirt leaves no doubt as to where David White stands—or sits. He is downstream of the dam, where the Ocklawaha looks a lot more like he thinks it should.

Viewed from space, 186-mile-long Lake Powell looks less like a lake than an object lesson in fractals, its myriad channels snaking up side canyons like so many watery dendrites. Up close, the visitor relies on facts and figures to get some idea of the immensity. The reservoir has more shoreline than the West Coast and took 17 years to fill. Glen Canyon Dam alone consists of ten million tons of concrete. And yet, for all that, some insist the dam and Lake Powell were never needed.

The project was designed primarily to store water for the future development of the Upper Basin States—Colorado, New Mexico, Utah and Wyoming. Thirty-five years after its completion, only two "straws" draw off the reservoir, both in Arizona. One supplies the lakeside town of Page (pop. 8,500); the other goes to the Navajo Generating Station, a nearby coal-fired plant. Meanwhile, critics eagerly point out, the lake loses roughly a million acre-feet of water annually to evaporation and seepage into the surrounding sandstone. It's enough water to sustain Los Angeles for a year.

But whether it is possible to restore the delta—to say nothing of the Grand Canyon and Glen Canyon—is a matter of contentious debate. To be sure, there is no shortage of questions. One is how to deal with the accumulated sediment behind the dam, much of which may be contaminated by heavy metals. More fundamentally, what is restoration, anyway?

For Dave Wegner, who spent 14 years studying the environmental impacts of Glen Canyon Dam, the answer to that last question is simple: "long-term ecological sustainability." And, continues Wegner, "the easiest, most cost-efficient way to achieve that, if indeed you are serious about restoring our environment and our endangered species, is by decommissioning Glen Canyon Dam."

To Larry Tarp, a Page resident since 1997 and president of Friends of Lake Powell, tearing down the dam is a prescription for economic and environmental disaster. To appreciate the economic effects, says Tarp, a retiree who keeps his 64-foot houseboat on the lake, all you have to do is consider the nearly three million visitors a year who come to Lake Powell for recreation. As for the environment, he says, returning a free-flowing river through the Grand Canyon would wreak havoc, killing or displacing species that have adapted to the regulated river, such as trout and bald eagles. "Has the lake changed Glen Canyon and the Grand Canyon and the Southwest?" he asks. "The answer is yes, forever."

But hydrologists will tell you that time is ultimately on the side of the river. Centuries hence, the reservoir will inevitably fill with silt and the river will flow over the dam. Do nothing, and Glen Canyon Dam will one day become Glen Canyon Falls.

"And we all know that rivers level mountains," David Brower says, grinning at the thought.

Time would not appear to be on the side of salmon in Idaho, however, where the fish have to contend with eight federal dams on their way to and from the ocean. No longer resembling the great rushing torrents they once were, the heavily exploited Columbia and Lower Snake rivers have been turned into a connected series of long, narrow lakes, stairstepping to the Pacific. And while the hydro-system has turned the hills of Eastern Washington green, given the Northwest the cheapest electric rates in the country and allowed barge traffic to penetrate as far inland as Lewiston, Idaho, it has also pushed the salmon to the brink.

It is no small problem. Today, the government annually spends hundreds of millions of dollars attempting to rectify the situation. While upstream fish passage works reasonably well, juvenile salmon migrating downstream face a lethal gauntlet of turbines and some 400 miles of predator-filled slack water. In an attempt to mitigate those hazards, the Army Corps of Engineers has been barging and trucking salmon smolts downstream of Bonneville Dam, the last dam on the Columbia. Even with all the effort, returns have been dismal. Snake River chinook salmon and steelhead trout have recently been listed as threatened under the Endangered Species Act; sockeye salmon were listed as endangered in 1991. In 1994, only one mature sockeye salmon successfully made the 900-mile journey from the ocean to its natal spawning grounds in Redfish Lake. In 1995, none did.

Steve Pettit, a biologist and fish passage specialist with the Idaho Department of Fish and Game, remembers floating down the river the day they closed the gates on Lower Granite Dam, the uppermost obstruction on

Edwards Dam, on the Kennebec River in Maine, is to be demolished. Steve Brooke (below) coordinated the campaign.

the Lower Snake, in 1975. "It was the saddest day of my life," he says. "I cried like a baby." Now he and many others hope to see the dams mothballed and the Lower Snake reopened, a decision that the National Marine Fisheries Service will have to face in 1999. Restoring the river is the

surest and quickest way, Pettit maintains, to reach the 2- to 6-percent return rate (that is, 2 to 6 returning adults for every 100 juveniles migrating to the ocean) fisheries biologists agree is necessary for recovery. Under barging, he notes, the return rate has been consistently less than 1 percent and as little as 0.2 percent.

If the debates are complex and heated, one thing is clear: no matter what the outcome on the Lower Snake, the Colorado or any other river, dams can no longer be taken for granted. Perhaps nowhere has the fact been as clearly heralded as on the banks of the Kennebec when the Secretary of the Interior, Bruce Babbitt, delivered a speech at the signing ceremony for the agreement on Edwards Dam. "This is not a call to remove all, most, or even many dams," the Secretary said. "But this is a challenge to dam owners and operators to defend themselves—to demonstrate by hard facts that the continued operation of a dam is in the public interest, economically and environmentally."

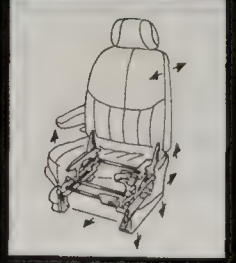
Meanwhile, the dams on the Elwha continue to generate less than half the electricity needed to run a single Port Angeles pulp and paper mill, and the fate of the river's salmon hangs in the balance. By early August, the snowmelt is nearly gone and the temperature in the lower river, exacerbated by the heat-trapping reservoirs, has climbed to 60 degrees Fahrenheit. Worried that a potentially lethal gill parasite of the genus *Dermocystidium* will proliferate in the warm water, state Department of Fish and Wildlife employees, aided by volunteers, gather each morning to haul fish out of the river and transfer them to the controlled conditions of the hatchery. It's a stopgap measure, according to volunteer Dick Goin.

A retired millworker and homegrown expert on salmon, Goin was a young boy when he moved to the area with his family in 1937, fleeing a drought in Iowa. He says his concern for the fish stems from simple gratitude: "Those salmon sustained us when I was a kid, and I guess I figure I owe it to them to keep 'em around." Now approaching 70, Goin reckons he still logs some 200 miles per year walking local rivers.

When asked what he thinks about the chances for the Elwha's restoration, Goin answers readily. "People ask me all the time what's wrong with our rivers and I always say to 'em, 'Show me a river.' Most of them have so many things wrong with 'em, see, it's hard to know where to start. But the Elwha's unique: it's only got one thing wrong with it." He pauses. "Remove the dams, and I don't see how it can't work."

This is Patrick Joseph's first story for Smithsonian; *he lives in San Francisco. Glenn Oakley shot stories on wolves and condors; he also works for* Outside *and* Audubon.

It blurs the line betw



Trimmed with leather that's perforated to further absorb interior noise, Town & Country boasts Quad Command bucket seats. Also, the front seats have eight-way power, are heated and have two driver's seat memory settings.

Preferred Suede is a registered trademark of the Milliken Company. *Strategic Vision's 1998 Vehicle Experience Study™ surveyed 32,191 Oct. - Nov. new vehicle buyers of 200+ models after

een needs and wants.

It's the automotive world's most ingenious way of reconciling space with luxury. After all, no other vehicle allows you to seat seven in a cabin tailored with leather and Preferred Suede.® The 1999 Chrysler Town & Country Limited. A vehicle that also features Dual Zone Temperature Control and a fold-down center armrest on the rear bench seat. Add a 10-speaker, 200-watt CD/cassette stereo and it's small wonder that Town & Country won Strategic Vision's 1998 Total Quality Award™ for "Best Ownership Experience" in minivans.* Inquiries? Call 1.800.CHRYSLER. Or you can visit www.chryslercars.com.

ENGINEERED TO BE GREAT CARS

CHRYSLER TOWN & COUNTRY

the first 90 days of ownership.

PROTECT

BY RICHARD WOLKOMIR PHOTOGRAPHS BY RICHARD HOWARD

IN A SMALL TOWN THAT PRACTICES COMMUNITY POLICING, OFFICERS FAITHFULLY FULFILL THEIR MISSION WITH COURAGE AND COMPASSION

& SERVE

The face of Montpelier, Vermont's police force comprises seasoned veterans and newly commissioned rookies, including, from left, Chief Doug Hoyt, Officer Aimee Tremblay, Sgt. John Martin, Officer Eric Nordenson and Officer Mark Moody.

AN ELDERLY WOMAN, FROM ANOTHER STATE, MOTIONS HER HUSBAND INTO A MOTEL PARKing space. The husband's foot slips on the gas pedal. Sgt. John Martin must tell him he has crushed and killed his wife of 52 years.

Drug dealers arrive in our town, Vermont's tiny capital. A local confederate holds them up with a shotgun. The gunfire brings in Sergeant Martin and his colleagues, pistols drawn.

I wondered about never knowing what your workday will bring, and what might happen to you. I wondered about the authority we give the police, and how they must decide, many times every day, how heavy their hands should be. I wondered how my town looks through a police cruiser's windshield.

At dusk in downtown Montpelier, an officer patrols the streets.

Painted on the door is a gold badge inscribed "Montpelier, The Capital City—Police." It was just minutes ago that the woman telephoned, from a nearby farmhouse. But Montpelier has only 8,500 people. Distances are short. Even here on the outskirts, the police can respond quickly.

She looks away from the deer. It is struggling, its legs and body broken. The shot, sharp and clear in the morning air, reverberates from the mountains.

As Sergeant Martin reholsters his .45-caliber semiautomatic, the woman stares at the police officer she summoned. Her eyes are narrowed.

"How does that make you feel?" she demands. "How does it make you feel, doing that?"

3:17 P.M.—JUVENILE OUT OF CONTROL

"I want you out!" Officer Mark Moody tells a 16-year-old in the backseat of an ancient Cadillac Fleetwood. The teen sports a blond buzz cut, jumbo jeans, sleeveless red sweatshirt, weight-lifter arms. Moody waves on the Cadillac, with its five remaining young riders.

The shot, sharp and clear in the morning air, reverberates from the mountains.

I had first met John Martin at our town's high school track, where we both ran after work. We talked about lap times. I also saw him patrolling in a police cruiser, yellow sergeant's chevrons on his blue sleeve. In time, I asked if I might accompany him on his rounds.

And so, for three months, I rode with the officers and listened in at headquarters, as the dispatchers radioed citizens' requests for help to the patrol cars. When I began to write about our small-town police force's work, it took the form of many incidents, fitted together, to form a many-faceted mosaic.

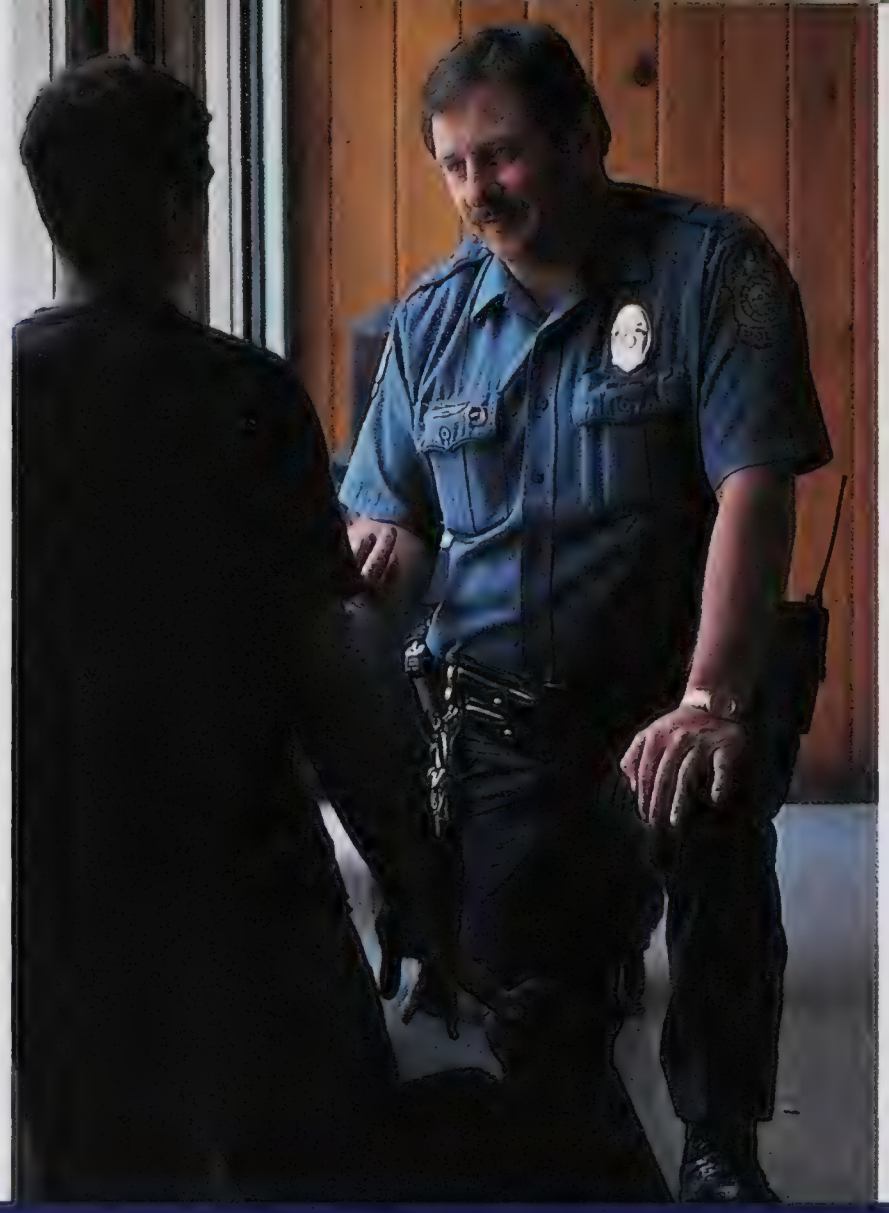
I translated the police log's 24-hour times into normal time. Privacy laws have required the disguising of youths' identities. Otherwise, this is how it is, in a small American town, on patrol.

6:42 A.M.—CAR VS. DEER

She bites her lip, a forty-something woman in a going-to-the-office suit. Mist rises from the fields this chilly morning. She is not looking at the deer her car hit.

Sgt. John Martin has just arrived in his white-and-blue Chevrolet Caprice, with a rack of blue lights on top.

Officer Nordenson delivers a warning to a speeding motorist.



Officer Mark Moody often relies on empathetic listening skills.

"Your mom called, Seth—I'm picking you up, and it's not to be slamming you," Moody says. "Why can't you come to me when you have a problem, instead of skipping school and running off with these guys?"

Back at the police station, Moody calls Seth's mother, then dials the school. "I don't trust any of them," Seth mutters. This morning, following a misunderstanding over access to the school gym, Seth had stormed home, threatened his mother, and then disappeared.

"You have to understand who's creating your problems," Moody says. The officer wonders if Seth is reachable. He perceives a coldness in this boy.

"We have to get this anger stuff under control—we need to get you on the football team," Moody says. He is the high school's assistant football coach. A fellow officer, Sgt. Neil Martel, is the head coach. "I wasn't in shape this year," Seth mumbles. "We should get you into a group activity," Moody says. "Well, I don't want to be," Seth says. Moody frowns. "If you become an angry adult . . . You told your mom bad things this morning," he says. "Yeah, I said some things I wish I hadn't said," Seth says.

Later, in a back room, Moody is encouraging Seth to apologize to his mother when Moody's belt radio crackles: a Union Elementary School child, gone berserk. He sprints to his cruiser.

Mark Moody is Montpelier's unofficial juvenile officer. He looks like a heavyweight prizefighter off his training regimen. But he radiates gregariousness. Once, after a temporary breakup with his girlfriend, baskets of flowers began arriving for him at the police station from hopeful single women, to his fellow officers' hoots.

Moody was the 14th of 15 kids. Forty-three bars dotted the Adirondacks town where he was born in 1957. When he grew into a beefy teenager, his harum-scarum older brothers invited him to bars and surreptitiously told roughnecks the big kid could lick anyone. Only later did he learn why he had so many fights.

He might have gone bad. But his father and the town's police chief persuaded him to earn a community college degree in law enforcement. He took every possible psychology course. Now, patrolling the schools and streets, he hears choruses of "Hi, Officer Moody!" Boys standing gun-belt high get a "Hey, Big Guy." For girls, it is "How are you doing, Sunshine?"

At Union Elementary, a 10-year-old lies prone in an empty classroom, his face buried in his arms. Desks overturned. Papers shredded. Plastic blocks scattered. Two administrators have their hands on the child's back, calming him. His shoulder-length hair is red as fire.

"Kermit, do you know who this is?"

"Mark Moody," the child moans, face down. Moody kneels beside the boy. "Is your mom home?"

"I don't know."

The behavioral specialist, who is familiar with Kermit's troubled history, says: "His biggest fear is that he'll be taken away."

Kermit's older brother—after sticking a knife in a doorway inches from his mother's face—was put into foster care. Now that the brother is out of the low-income housing complex, away from the mother's abusive boyfriends, Moody says, he is flourishing, his grades high. Kermit, frustrated by a mathematics assignment, has just pulled a teacher's hair, hurled pencils at her face, threatened her with a stapler.

"Am I being taken away?"

He is sitting up now, crying, his face puffy. He asks for a tissue.

"I'm taking you to the police station, and I'll call the people who work with you," Moody tells him. He is changing Kermit's focus. Stop him from thinking about grievances. Start him thinking about how to talk to Officer Moody. It is the technique Moody employs regularly to calm a fighting drunk.

He helps Kermit pick up the strewn blocks. They are geometric shapes. Moody's partner on the day-shift patrol,

The boy, frustrated by a math assignment, has threatened a teacher with a stapler.

Chief Hoyt discusses a possible arson case with an investigator.

"We know you're under there," Moody yells. "Come out, or we're releasing the dog."

Mike Long, has arrived and the two officers help Kermit fit the blocks together, completing his assignment.

Long, like his father, joined the New York City police force. He became a mounted officer. He even galloped to bank robberies on horseback. But he and his wife decided that they wanted to raise a family in Vermont. So he joined the Montpelier Police Department and traded his beloved horse for skis. He is still athletically lean, with a full handlebar mustache.

"At 5:30 I have to leave," Kermit announces. "I have my baseball game."

Moody is silent. Kermit's eruptions have become too violent. Moody drives him to the station and makes telephone calls. Kermit's mother has been insisting for some time that she no longer can handle him. Social workers agree. Moody writes an affidavit—simple assault, disorderly conduct, disturbing the general peace. It allows the state to take custody.

Afterward, Moody and Long talk on the police station's stoop. They do not talk about Kermit. They find an easier subject, an arrest. It was when they became Montpelier's first canine team. Moody was the handler. Long was the dog.

It is 3 A.M., Moody recalls, and he and Long are chasing two car thieves. Prints in the snow lead from the ditched car to a slush-filled river. They hear splashing upstream. A few minutes later, they stand on a bridge, sure the culprits are hiding below. Neither officer wants to wade into the icy water in order to make the arrest.

"We know you're under there," Moody suddenly yells. "Come out, or we're releasing the dog."

He looks at his partner. Long imitates, very convincingly, a German shepherd's ferocious bark.

A frightened voice from under the bridge: "Please, we're coming out—don't let the dog loose!"

Minutes later, one of the arrested men, dripping and shivering in the back of the cruiser, cries: "Hey, where's the dog?"

Moody grins. Long, glancing sardonically at the culprits, says "Woof!"

11:44 P.M.—DISTURBANCE, NEIGHBORS

Early Friday evening, sunny and warm. Officer Eric Nordenson drives past split-levels. People mowing their lawns wave. Nordenson waves back. At this hour he likes to let people see him in his cruiser. It makes them feel safe. Not until dark will his patrol take on an edge.

Nordenson is working the evening shift, 4 P.M. to midnight. But he will work overtime, patrolling into the night shift, midnight to 8 A.M.

He cruises through the town's red-brick center, where State Street crosses Main. Boutiques. Sidewalk cafés. Movie theaters. Restaurants. At the City Center mall, the usual mob of skateboarders. But Nordenson sees no skateboards slamming at startled citizens' heels tonight. He glances over at Charlie-O's bar. A few midnights ago, a 20-year-old, denied service because of his age, rampaged outside Charlie-O's, spitting on the window. Nordenson and Officer Trevor Carbo found him in an alley. He refused to remove his hands from his pockets. A gun? It proved to be eight packets of heroin.

Nordenson drives up into the residential area known as Towne Hill, admiring the homes. He is about to graduate with a bachelor's degree in criminal justice. He would like to buy a house . . .

Minutes later, impatient cigarette smoke issues from a stopped speeder's open window. Nordenson writes a ticket, $113. He tells himself, "That's cheap at twice the price!" This warm evening has people driving too fast. It bothers him. So many little kids are out. Some play on the soccer teams he coaches.

Nordenson settled on this profession in order to work with people. But he has found that sometimes he must confront them instead. Under his shirt he wears four pounds or so of bulletproof vest and a metal plate. "If I didn't wear this vest, my mother would *kill* me," Norden-

TRACKING A

PACKAGE

SHOULDN'T BE EASIER THAN TRACKING A

PERSON.

Introducing the world's first handheld global satellite phone and paging network. Now your wireless service can cover the earth.

IRIDIUM

CALL TOLL FREE 1-888-IRIDIUM OR VISIT WWW.IRIDIUM.COM calling planet earth

THE IRIDIUM NAME AND LOGO ARE TRADEMARKS AND SERVICE MARKS OF IRIDIUM LLC © 1998.

son jokes. He also wears a 14-pound gun belt, holding everything from a pistol, ammunition and handcuffs to mace, a nightstick and a flashlight.

Now it is dark. He begins checking behind buildings, swiveling his cruiser's side-mounted searchlight. Behind the River Street storage lockers he tries to rescue a stray cat, but it slips away. Later, passing his apartment, Nordenson shines his searchlight at the window. Behind the glass, his own cat's eyes shine back.

Nearly midnight. Periodically, his radio squawks—the dispatcher, his patrol partners, police in nearby towns. He passes a convenience store. Two out-of-town gang members recently fought each other here. Nordenson and his colleagues wrestled them into submission. One man's knapsack held a notebook with the slogan "Cops are the biggest gang!" The knapsack also contained 126 grams of hallucinogenic mushrooms and 89.4 grams of hashish.

"816." The dispatcher is calling Nordenson's number. He arrives at a dilapidated River Street tenement. The woman is 50ish, wearing a pink nightgown. Her apartment's air is blue with cigarette smoke. "He's supposed to be on parole . . ." she says, eyes upturned toward the thudding music that shakes her knickknacks. "He said he'd turn it down, but then he didn't . . ."

As Nordenson clomps upstairs, Sgt. Jim Gavin, a large, gray-haired presence, materializes behind him. Backup. A brown-bearded man answers the door. Sleeveless T-shirt. Tattooed arms. "Nope," he says. "She never complained." Music blares.

"Will you tone it down?"

"Sure, sure," the man says.

"Are you on parole or house arrest? What about probation? Do you have any stipulations about drinking?" Nordenson asks him.

"Nope," the tattooed man says, eyes averted. Moments after the door closes the music quiets. Outside, Nordenson and Sergeant Gavin watch streetlights glisten in the river. An old woman, dressed like a Russian babushka, waddles past the parked cruisers and disappears into the darkness. A message from the dispatcher: the tattooed man lied. He is not one of the dozen felons on house arrest, confined to apartments around town because of inadequate prison space. But the man is, as it turns out, an individual on probation.

"10-14." Prowler. Nordenson speeds to the corner of State and Main. It is a burned building, undergoing reconstruction. An opened basement door. It's possible the intruders are still inside.

Five officers methodically search the building, pistols drawn. Flashlights beam, illuminating sanders and hammers workmen left lying. A smell of sawdust and charring hangs in the air.

"People slip in here to do dope," one man says. Another shrugs. "They left just before we got here." Eric Nordenson backs his cruiser into its slot behind the police station. He will cut his overtime short tonight, he decides, and head on home to his cat. He informs the dispatcher, "It's too quiet out there tonight."

It's possible the intruders are still inside. Five officers search the building, pistols drawn.

Officer Eric Nordenson, center, and backup check out a possible domestic abuse case.

7:11 P.M.—LOUD SCREAMS

Chief of Police Doug Hoyt stands on a ladder, painting his house. From the woods, a scream.

Hoyt has lived in Montpelier most of his 52 years. After serving in Vietnam, he joined the police in 1971, became chief in 1980, then earned a bachelor's degree "to get smarter." He knows the town—8,500 residents, swelling to 25,000 on weekdays as legislators and workers for the state, insurance companies, law offices and lobbies pour in to their jobs. Many restaurants. Just three bars. Some graying Sixties counterculturists. And a section of seedy tenements along Elm Street, Barre Street, River Street. But there is little violent crime.

This screaming, however—it sounds like a woman. Chief Hoyt telephones for backup. Then he fetches his pistol and starts into the woods.

Officer Steve Nolan catches up. Three more officers are coming. Before they arrive, Hoyt and Nolan burst through underbrush and stare.

Two women. One man. Each of them is naked from the waist up. They are whacking trees with children's plastic bats. Shrieking.

It is legal. Sheepishly, the revelers collect their clothes. They fade into the woods just as the backup officers arrive, ready for action.

THANKS TO PHILLIPS, WEARY TRAVELERS
WILL ALWAYS HAVE A PLACE TO STOP AND REFUEL.

By donating a former plant site to the Cactus Playa Lake Project, Phillips Petroleum helped expand and protect the habitat of hundreds of thousands of migratory birds. The project resulted from the cooperative effort of Phillips, wildlife and conservation agencies and the community of Cactus, Texas. Now bald eagles, waterfowl and dozens of other bird species have a better place to rest along the Central Flyway. It's yet another example of what it means to be The Performance Company.

PHILLIPS PETROLEUM COMPANY

For a copy of our annual report, call 918-661-3700, write to: Phillips Annual Report, B-41, Adams Bldg., Bartlesville, OK 74004, or visit us at www.phillips66.com.

The final Incident Report entry reads: "1 Male, 2 Females. Primal Therapy."

11:45 A.M.—ABUSE PREVENTION ORDER SERVED

Elm Street. A tenement backed against a cliff. Mark Moody knocks on a peeling door. It opens, releasing a whiff of ripe garbage. A brown-haired woman in her 20s blinks up at him. Her face, almost pretty, is blank.

"Lorraine, I have a restraining order for you," he says. She blinks. "You have to stay away from Peter," he says, quietly, forcefully, as he hands her the papers. She blinks at them. "I gave one of these to Tony, but now he's using you to get to Peter, isn't he?"

She looks up at him quizzically. She blinks again.

Peter, who is developmentally disabled, stacks boxes at a supermarket. Lorraine and her boyfriend, Tony, are developmentally impaired, too, but more savvy than Peter. They used friendship to bilk him of his earnings. After Moody served Tony with a restraining order, Lorraine became a go-between.

On night rounds, Nordenson checks downtown businesses to make certain that doors are locked tight.

A tall man appears behind Lorraine. He is dark and shifty-eyed. He belches.

"Tony—don't try to get someone else to do it now," Moody tells him. "Then I'll be coming to arrest you, and those boys in prison won't treat you well."

"Yeah, I don't want to go to jail, I don't want to go again," Tony says earnestly. "Do you want a soda?"

"No thanks," Moody says. "I'm trying to lose weight and I'm sticking to water these days." Besides, he thinks, what might be on that bottle?

"Now, I've told the judge I warned you both . . ."

Lorraine holds up her hand. It seems, almost, that she expects him to kiss it. But she is showing off a ring.

"We're married now," she says. Tony beams.

2:11 P.M.—GENERAL TRAFFIC VIOLATION

On College Street, the robot radar unit is showing drivers their speed in red numbers. The residents here, living in a neighborhood of rambling old homes with BMWs and Audis parked in the driveways, have complained about speeders. Originally, Sergeant Martin had thought of installing a robot sentry, which automatically photographs speeders' license plates.

But the price proved too steep, $20,000. He bought a used readout for $200. Public Works mechanics mounted the readout, a radar gun and a battery on a hand-built trailer. Final cost: about $2,000.

After it appeared, three teenagers stopped Officer Mark Moody—"Hey, that thing takes pictures of license plates, right?" Moody looked mysterious. "Could be," he said.

Today, to give the robot teeth, Sgt. Neil Martel has backed his cruiser into a College Street driveway. His radar just tagged a minivan that was traveling at 42 miles per hour. "I know I was speeding," the woman tells him. "But I have to get to my office! I have a stomach bug! I'm about to throw up!"

Sergeant Martel listens wearily. He has heard many excuses in the 13 years since he graduated from college. This one demonstrates real flair. But as he walked to the stopped minivan, in the side mirror he saw the woman grinning. "We'll let it go," he says. "Drive carefully!"

"I know I was speeding. But I have to get to my office. I'm about to throw up!"

8:05 A.M.—SKATEBOARDING PROBLEMS

Yesterday, Officer Mike Long harangued these skateboarders: "You have to stay off people's porches, and you can't interfere with traffic."

Now, a boarder has careened in front of a car. Long seizes the board. An outraged pack of 13-year-olds circles him, yelling "Thief!"

A few days later the boy whose skateboard Long had confiscated arrives at headquarters with his father, who is an attorney. The father acknowledges that confiscation was indeed appropriate. Long returns the skateboard. Maybe the boy learned something, someone suggests.

"No," Long says flatly.

8:59 P.M.—ROBBED AT GUNPOINT

A 911 call. Foti Fuels, on Route 2, the night clerk—two men wearing ski masks held a pistol on him, took cash,

A KNIGHT IN SHINING DOUBLE-SIDED GALVANIZED STEEL.

The new **YUKON DENALI**

Like the great GMCs before it, the new Yukon Denali™ is wrapped in luminous steel. Underneath are a heavy-gauge steel frame and a 255-horsepower Vortec™ V8 engine. Inside are four heated, leather-trimmed seats and a Bose® Acoustimass® audio system. And even deeper inside is nearly a century of providing vehicles for professionals who depend on their trucks to do things somewhat more demanding than impressing the neighbors. Call **1-888-GMC-DENALI** or **www.denali.gmc.com.**

GMC®

Do one thing. Do it well.™

duct-taped him and fled on foot. He just freed himself.

Officer Aimee Tremblay volunteers to back up an officer from neighboring Berlin, who has arrived on the scene with her police dog. They follow the robbers' trail through the snow, their belt radios crackling. Barre police are converging to assist, too. Berlin officers are scouting ahead.

It is a frigid, moonlit night. From a hilltop, the pursuers see a broad field, with moving figures. Sgt. Jim Gavin has circled ahead in a cruiser, along with other Berlin backup. Tremblay sees the robbers turn and run back toward her and the Berlin officer.

"Don't move!"

Facing the two officers' pistols, the exhausted robbers collapse in the snow. Back at the station, Aimee Tremblay changes out of her soaking uniform in the locker room. Suddenly she realizes: as she and her partner followed, the robbers could have hidden, shot them both.

Mark Moody once threw tear gas into a home where a man held his wife and son hostage with a rifle. Shots. A sensation of two ball-peen hammers whamming his thigh. A surgeon extracted one bullet, but the other remains. It hurts on cold days.

Aimee Tremblay only recently graduated with a bachelor's degree in criminal justice and psychology. She knows the police are rife with injuries, mostly from subduing prisoners—ruptured spinal disks and dislocated shoulders and blown knees. Chief Hoyt has been bitten three times. But now Tremblay is struck: "I could be killed!"

The mood passes. She has to write an affidavit. Officers' reports. Bail statement. Initial report. Arrest/custody report. Witness statements. Incident sheets. Evidence photographs. Evidence lists . . . She finishes at 7 A.M.

10:35 P.M.—PICKING FIGHTS AT THE BAR

"Yeah, I've had a few drinks," he says, belligerent. "I'm not breathalyzing anything." He is so inebriated his eyes look deranged. When the bartender here at Legends Nightclub took his car keys, he scuffled with him. "We heard you were going to drive," says Officer Trevor Carbo.

Carbo and three other officers, Chad Stacey, Jason Laferriere and Dave Martin (unrelated to Sgt. John Martin), stand around the drunken man, in the parking lot. Sgt. Jim Gavin arrives, just in case. "We need to get you home," Carbo says. Nobody wants to get physical with this man. But, if necessary, they will.

"Hey, I'm taking a business law course up at Johnson State College," the drunk announces. Trevor Carbo quickly responds. "That must be hard work." The drunk smiles. "I wish you guys could take that course with me!" he announces warmly. "OK, I won't drive—you hear what I'm saying here?"

"Sure, and here's your very own taxi, waiting for you right here," Carbo says, pointing to his police cruiser.

Watching his colleagues drive away, taking the drunk home, Officer Dave Martin stands a moment beside his own cruiser, remembering another alcohol-fueled incident.

A trailer park. A drunken man. A domestic assault. Martin is taking a statement from the woman when a pickup roars toward them. The woman screams, "That's him!"

Martin holds up a hand. "Stop!" Surprisingly, the truck stops. Martin unholsters his pistol, holds it at his hip, according to protocol. The window rolls down. A .45-caliber semiautomatic carbine slides out, pointing at him.

Martin's father was a state trooper. The younger Martin planned to become a dairy farmer but decided farming had no future. So he earned a degree in law enforcement. Police work, he guessed, would never be boring.

He thinks: Should I shoot him? Something tells him no. "Put down the rifle," he says. "Now! Put your hands on the dashboard!"

The gun barrel slides back inside the truck. The driver's hands rest on the dashboard.

7:54 A.M.—SAPT MEETING

"Who knows where her mother is," Officer Mark

Behind the wheel of his cruiser, Sgt. John Martin keeps a watchful eye on Montpelier's downtown.

The window rolls down. A .45-caliber semiautomatic carbine slides out, pointing at him.

IBM and Solutions for a small planet are trademarks of International Business Machines Corporation in the United States and/or other countries. © 1998 IBM Corporation. All rights reserved.

Reinventing Education

Computers can **make a** world of **difference** in our nation's education system.

They just can't do it on their own.

We don't just send computers to schools, we send people, too: experienced scientists and problem solvers. They help educators apply technology in ways that make profound improvements in the way schools are run. In Cincinnati, a team from IBM helped teachers design a new program that tailors courses and schedules to the unique needs of individual students, finally putting an end to "one size fits all" education. The result: better schools, smarter kids. To find out more about IBM's Reinventing Education program, visit us at www.ibm.com/IBM/IBMGives

IBM

Solutions for a small planet™

Moody is saying. Martina, he says, is living with her older sister, who has three babies. Martina is 13. "Debris is ankle deep—literally," Moody says. "There's a man. Maybe the sister's husband. Maybe her boyfriend."

They sit in a circle at Main Street Middle School. Behavior specialist. Psychologist. Nurse. Counselor. Police officer. They are the Student Assistance Program Team.

A wayward high school 17-year-old, a friend of the older sister's, is suspected of edging into prostitution, Moody tells them. Martina idolizes her. "She's got nowhere and no one," Moody says.

State custody? Moody shakes his head. "She's not delinquent, she has food and shelter, she doesn't even look dirty," he says. "But the first crime she commits—and hanging out with the older girl she'll commit something—then we can act." The girl talks of transferring to a more permissive school system. "There's a winnable section to that kid, but also a tough section—if she moves, we're going to lose her," Moody says. They decide to keep watching over the girl. They will wait . . .

Driving back to the station, Moody spots a preschool boy on a Victorian's manicured lawn, holding a Frisbee. He wears a blue baseball cap with a yellow bill over his blond hair. He looks desolate. Impulsively, Moody stops, rolls down the window. "What's the matter?" he asks. The toddler shrugs. "Mom working? Nobody to play with?" The child nods, clutching his Frisbee. Suddenly Moody is out of the cruiser. "Throw it here!" he says.

8:42 A.M.—SENTENCING

Officer Aimee Tremblay has come to this sentencing hearing at the prosecutor's request, to testify if necessary. The courtroom is nearly empty. The judge sits up high, at the room's far end. To Tremblay's left sits the prosecutor; to her right, the defense attorney and her client, a pleasant-looking 21-year-old with combed-back brown hair. His face is strained.

A sheriff clocked him at 88 mph. Tremblay arrived in 51 seconds, but the car had crashed into someone's front yard. Five youths, three unconscious. Blood everywhere. Ambulances. Tremblay searched the car—vodka and juice, a cooler in the trunk full of beer bottles and cans, more beer bottles up front, and marijuana. (Recently, after a keg party, Sgt. John Martin and Eric Nordenson found a car crushed. Martin used his gun-belt knife to cut two of the four high school students out of their seat belts as they hung from the straps, dead.) Three weeks after Tremblay arrested the young driver, he was arrested again in another town. Driving drunk.

The judge gives the driver 15 months to 10 years in a work camp. Tremblay remembers the driver telling her that, at one point, as he roared through the residential neighborhood that night, he was going faster than 100 mph.

1:35 P.M.—MEN IN WATER

A bitter winter afternoon. Two 20-year-olds slide a canoe into the Winooski River, downtown. A waterfall's roiling overturns them. One man sinks instantly, drowned. The other, wearing a life jacket, bobs in the vortex, unconscious from the cold. It is only a block to the police station. Sgt. John Martin and another officer come running.

Shedding his gun belt, Martin jumps into the river, swimming through slush. He competes in iron-man contests—a marathon plus bicycle and swim races. Even so, the icy water stuns him. His own consciousness slips.

He grabs the canoeist. Firemen throw a rope across the river. Martin clenches it, holding the canoeist with his legs, hauling the man hand-over-hand to shore.

Afterward, neither the canoeist nor his family offers thanks. But the city council awards Martin a red-white-and-blue pin, for heroism. Usually, when people ask, he says, "It was for learning French."

10:02 A.M.—TRAFFIC CONTROL FOR PARADE

Many are dressed as bumblebees. They toddle about the state capitol's lawn, preschoolers about to parade. Yellow and red balloons bob.

"Put the slowest ones in front so they don't straggle out behind," Sgt. John Martin says. Back in his cruiser, he switches on his radio. "This is 802," he says, "802 to all units—they've started, heading for Court Street."

A gaggle of bumblebees leads, carrying a banner inscribed "Celebration of the Week of Youth." Martin moves his car to block an intersection, so the parade can pass safely. A tiny fireman marches by. A cowboy. Somebody wearing a red cape. Baby carriages propelled by moms and dads roll along. Now Martin drives his cruiser behind, protecting the parade's rear. As he passes the officers stationed at intersections to control traffic, they fall in beside his cruiser, walking. Mike Long. Aimee Tremblay. Mark Moody. "Hey, want a balloon?" Martin inquires over his radio to Eric Nordenson, who bends his chin to reply in his lapel microphone, "I'll have a yellow one."

Superman is marching. And an astronaut. Now the parade is ending. It has circled back to the capitol. Sergeant Martin, in his cruiser, and the walking officers pass two cowgirls, on the grass.

"Wave," one small cowgirl instructs her even littler friend. "Wave to the police officers!"

Richard Wolkomir says that, after doing this story, he observes speed limits assiduously. Richard Howard often contributes to SMITHSONIAN.

America, The Beautiful, Contains 3,618,700 Square Miles.

Now, You Can Explore Nearly Every Mile, From Sea To Shining Sea, In Your Computer...

Introducing The Maptech® Family Of Digital Maps And Software. Sophisticated, Yet Easy To Use– Whether You're A Map-Savvy Pro Or Just An Amateur.

It may be beautiful for spacious skies.

But finding your way in the great outdoors of America can take some doing – if you're heading off the beaten path.

You can find plenty of road maps – even PC software – to plan a route from city to city.

But off the main roads – for hiking, cross-country skiing, or camping, say – you need to know, literally, the lay of the land.

Until now, that's meant the paper, *topographic* maps of the U.S. Geological Survey. These USGS "topo" maps show all the ups and downs of the landscape.

But they also take a good deal of know-how, calculations – and time.

Which is where Maptech comes in. With a whole library of digital software and maps – based on those USGS maps.

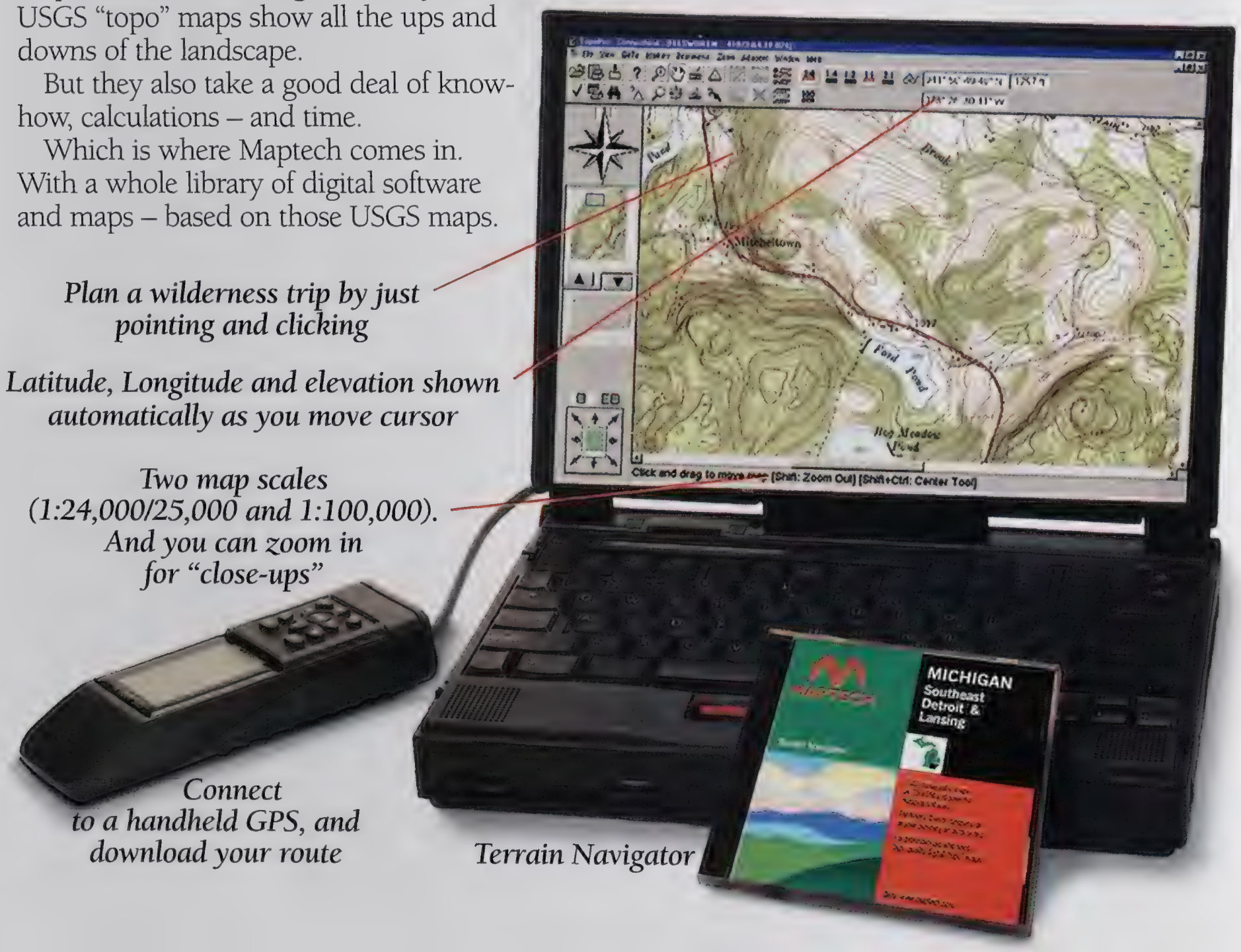
How to find your path off the beaten path

The next time you're planning an outdoor trip, make your first stop our new Maptech Terrain Navigator.

On a CD-ROM, it contains USGS "topo" maps for your area. (Eventually, all 50 states will be covered.) Plus, powerful software for plotting a course.

How does it work? Couldn't be simpler. If you know Windows, you're already practically an expert!

Just pop the CD in your PC or laptop. Then, with a mouse or trackball, draw your path on

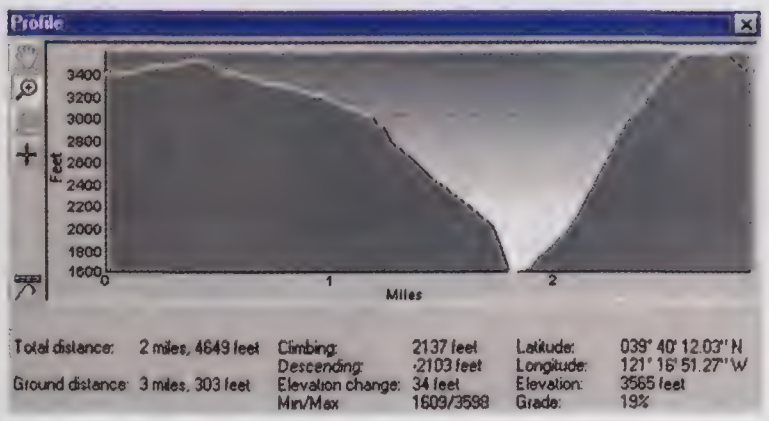

Plan a wilderness trip by just pointing and clicking
Latitude, Longitude and elevation shown automatically as you move cursor
Two map scales (1:24,000/25,000 and 1:100,000). And you can zoom in for "close-ups"
Connect to a handheld GPS, and download your route
MICHIGAN
Southeast
Detroit &
Lansing
Terrain Navigator

the onscreen map.

When the cursor reaches a place you want to mark – a resting point, perhaps – just *click*. This leaves a marker. (You can label it, too.)

Want the distance from point A to point B? Terrain Navigator measures it automatically.

Finally, you can print out customized maps. In black & white or color.



Includes elevation profile. Plus, "line of sight" tool to find, for example, the best places to view a well-known landmark from your hiking path.

Or if you have a handheld GPS (Global Positioning System) unit, you can download your waypoints – and use *that* to guide your trek. Or *upload* a route from your GPS to calculate measurements or store for reference.

You even get an elevation profile, or sideview. So, as you walk, you can check your progress visually – by the shape of a nearby mountain, for example.

You can see all of Terrain Navigator's features by downloading the free demo at our Website. (See the back page for details.)

Is this a big idea? Big as all outdoors.

Only $99 per CD for most areas.

It's like having a Park Ranger in your PC.

How would you like to have a National Park Ranger brief you personally, a week or so before you go to a National Park?

You could plan a route, figure out where to stay, learn about the park's wildlife and history – and know what to expect.

Wouldn't *that* make your whole trip more rewarding – and fun?

Well, that's what it's like using a Maptech National Park Digital Guide.

Yellowstone National Park
National Park Digital Guide
USGS topographic maps on CD-ROM, integrated with official U.S. Park maps, electronic "guidebook" and powerful navigation tools
Web www.maptech.com

National Park Digital Guides

Which features complete, detailed park maps – plus a database with a zillion facts about the park.

The maps include an official U.S. National Park Map, of course. But it's combined with topographic maps from the U.S. Geological Survey. You get an *exact* picture of the terrain – every last trail, cliff and waterhole.

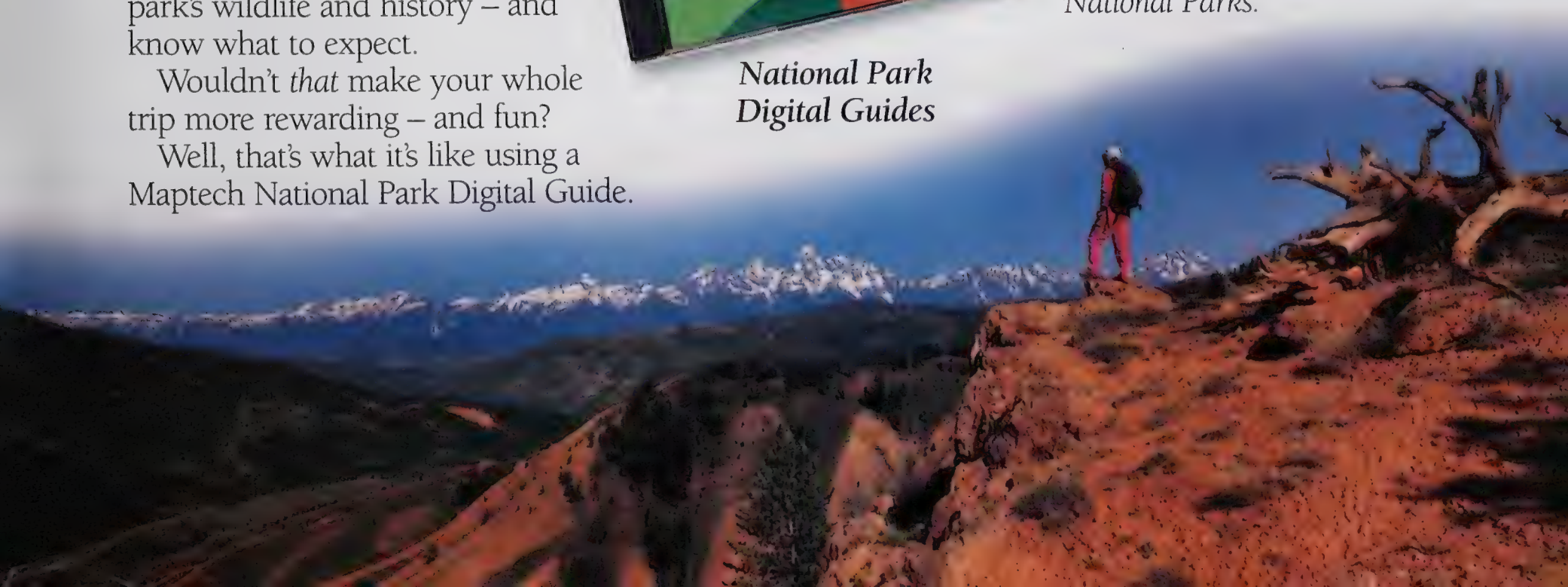
In addition, the National Park CD includes many of the features of our Terrain Navigator software. So, you can:

- Plot a course by pointing-and-clicking
- Measure distances and elevations
- Zoom in four levels for "closeups" of locations
- Use the elevation profile to check line-of-sight to landmarks or vistas
- Print out customized maps. Plus, lots more.

You can also jump to an electronic "guidebook," which gives you historical background notes on wildlife, weather and local geology. Even information about nearby lodging, camping, restaurants, guides. And more.

Before you explore the park, explore a Maptech National Park Digital Guide!

Available through the Lands' End® catalog, or from Maptech. Call 1-800-627-7236 (or see coupon next page). Only $29.50 for a single park, $69.50 for a region, or $179.50 for all 54 National Parks.



If you're going to take a hike – Take a Hike®!

Heading for the White Mountains, and wonder how long a certain 4-mile trek will take?

Planning a family jaunt to Olympic National Forest? Want an advance "peek" – to know what safety precautions to take?

"Take a Hike" Series

Then, you want Take a Hike! Each CD contains a digital reproduction of USGS maps of the hiking area – plus our Terrain Navigator software.

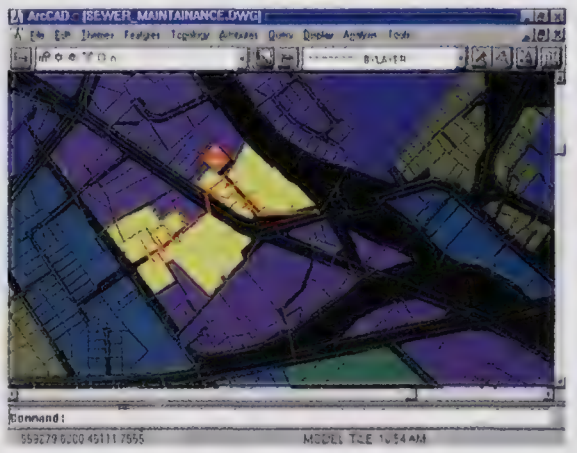
So, you can plot trails, mark and measure distances, and zoom in four levels for "closeups"– just by pointing-and-clicking. Has elevation and line-of-sight profiling, too. And a built-in Place Finder that lets you zero in on a location by entering its name.

In short, all the benefits of our most advanced digital maps – even if you're only a "now-and-then" explorer.

Available for White Mountain National Forest (New Hampshire), Olympic National Forest (Washington), Tahoe/Gold Country (California/Nevada), Adirondack Park (New York), San Juan National Forest (Colorado). Other areas soon. Only $29 each.

Strictly for professionals: USGS maps you can "export"

If you're an engineer, architect or somebody else who uses "topos" professionally, we created the Maptech Terrain Professional series especially for you.



It features USGS maps – raster-scanned from the government's originals in crisp, full color replicas. On CDs.

What's more, they're *exportable in Geo-referenced TIFF formats.* So, you can use them with your specialized GIS software – for terrain modeling, roadway design, or hydrological analysis, for instance.

Call for technical details, or you can download a demo from our website.

If you'd like to know more about Maptech products, and get a free demo, visit our website, at www.maptech.com Or see below.

Even before Maptech turned to landlubbers, we made waves

A decade ago, we helped pioneer the "digital revolution" in marine navigation.

With award-winning, PC-based charts and software.

Today, Maptech offers the world's largest collection of marine digital charts, navigation software and cruising information.

It's used – and relied on – by tens of thousands of pleasure boats and commercial vessels, the world over.

©1998 Maptech, Inc

For information about our products mail this coupon. Or fax it to: **1-603-433-8505**. For faster service, or to place an order, call:

Name _____

Address _____

City _____ State _____ Zip _____

Phone ( ) _____ Day/Night (*circle one*)

Which Product(s) _____

SM1198

1-800-627-7236

www.maptech.com

MAPTECH®

Maptech, Inc., 655 Portsmouth Avenue, Greenland, NH 03840

SMITHSONIAN STUDY TOURS

The Smithsonian Traveler

To request a catalogue or brochure, please call (202) 357-4800. For all other information, call (202) 357-4700; or write to The Smithsonian Associates, MRC 702, Washington, DC 20560

Credit Cards Accepted!
Smithsonian•Discover
VISA•MasterCard

Call or write for your FREE **Smithsonian Study Tours** catalogue, featuring more than 300 educational tours to 250 exciting destinations in the United States and abroad!

Smithsonian Study Tours offer unparalleled educational travel opportunities. Enjoy traveling with engaging study leaders and fellow Smithsonian Associates.

International Tours

City Interludes *Throughout the year* Extended stays in some of the world's great cities: Venice, Florence, Shanghai, Hong Kong, Kyoto, Vienna, Prague, Krakow, St. Petersburg and Moscow.

Countryside Tours *Throughout the year* Relaxing journeys to France, England, Scotland, Wales, Austria, Switzerland, Italy, Hungary and the Czech Republic.

Indian Ocean Odyssey (South Africa, Madagascar and the Seychelles) *March 6-28* Aboard the *Hanseatic.*

Natural Treasures of Costa Rica *March 8-20*

Arabian Gulf Voyage *March 9-21* Aboard the *Sea Goddess II.*

The Legacy of Sicily *March 10-21*

The Galápagos Islands and Quito (Ecuador) *March 13-24* Aboard the *Isabela II.*

Voyage to West Africa *March 19-April 1* Aboard the *Clelia II.*

Golden Temples and Princely Palaces: From Singapore to India *March 29-April 14* Aboard the *Seabourn Spirit.*

Amazon and Orinoco Rivers *April 3-17* Aboard the *Levant.*

Classical Greece at Easter *April 4-17*

Spring Splendors of Greece and Turkey *April 5-19* Aboard the MS *Bremen.*

The Dutch Waterways and Belgian Countryside *April 12-25* Aboard the MS *Switzerland.*

Naples and the Amalfi Coast (Italy) *April 18-29*

Vanishing Gorges: China's Yangtze River *April 20-May 4*

U.S. & Canada Tours

Smithsonian "Anytime" Weekend (Washington, D.C.) Bring your family. Packages begin at $222 for two persons for two nights, and include a private tour of the Castle, an IMAX film screening and much more.

Wildlife of the Everglades *January 9-16*

Virgin Islands Underwater Treasures *January 20-25*

Canadian Rockies Winter Weekend *January 29-February 2*

NEW! **Death Valley (California)** *March 11-19*

Antebellum South: New Orleans to Natchez *March 12-19*

Hawaii's Trails and Reefs *March 14-25*

NEW! **Los Angeles and the Getty Center** *March 16-21*

Big Bend Natural History (Texas) *March 23-30*

NEW! **American Snapshots: Amelia Island (Florida)** *April 22-25* **Annapolis (Maryland)** *May 6-9* **Amish Country (Ohio)** *May 13-16* Three-night, all-inclusive excursions to communities that are the fabric of our national heritage.

Smithsonian Seminars

Concentrated study of specific topics:

Philadelphia's Founding Art Collectors *March 18-21*

Civil War: The Vicksburg Campaign (Mississippi) *March 24-28*

The Art and Spirit of Georgia O'Keeffe (Santa Fe, New Mexico) *April 21-25*

NEW! **Oxford/Smithsonian Cruise (Eastern Mediterranean)** *April 27-May 7* Aboard the MTS *Arcadia.*

New Orleans Jazz and Heritage Festival *April 28-May 2*

The Wright Way: The Career of Frank Lloyd Wright (Pittsburgh) *May 6-9*

Civil War: Shiloh (Tennessee) *May 19-23*

Odyssey Tours

Moderately priced tours with several departure dates in 1999 for more than 20 study tours and cruises:

NEW! **Paradors of Andalusia** 12-night tours in *January, February and March*

Egypt and the Nile 14-night tours in *February, March, April and May*

For a Smithsonian Odyssey Tours brochure, call 1-800-932-8287.

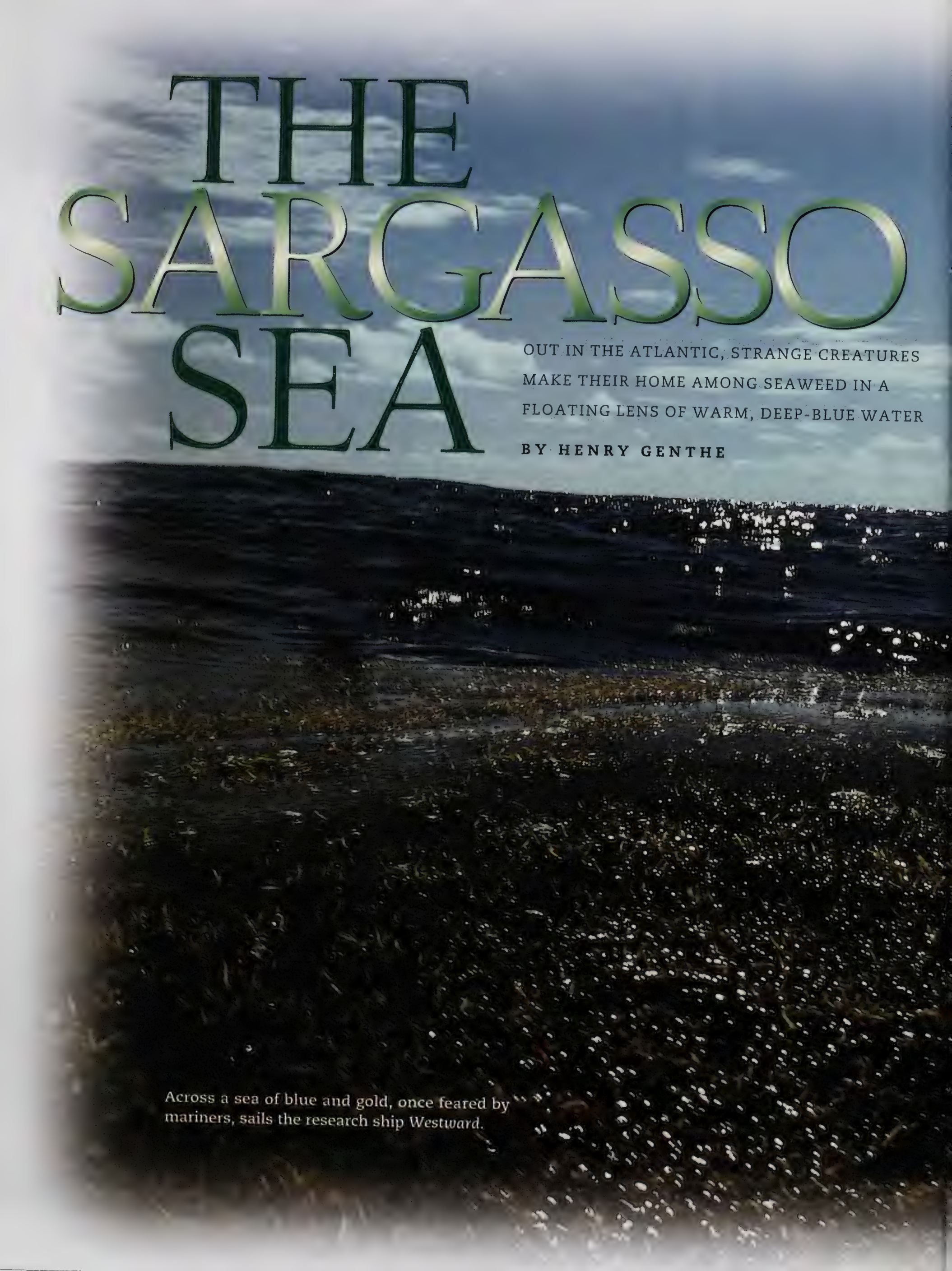
Visit us on-line at:
www.si.edu/tsa/sst

A Sampling of Learning Adventures for Smithsonian Associates

THE SARGASSO SEA

OUT IN THE ATLANTIC, STRANGE CREATURES MAKE THEIR HOME AMONG SEAWEED IN A FLOATING LENS OF WARM, DEEP-BLUE WATER

BY HENRY GENTHE



Across a sea of blue and gold, once feared by mariners, sails the research ship *Westward*.

IN THE SARGASSO SEA, MORE than a thousand miles from land, we were sitting in a golden carpet of seaweed. For hundreds of years, rumors of the mysterious Sargasso Sea had spread through the steamy forecastles of ships crowded with superstitious men sweating out long passages across the central North Atlantic. Here, in the middle of the ocean, sailors feared that a tangled web of seaweed would snare their ships, leaving them to perish from thirst in the sweltering subtropical calms.

Their rumors have long since been dispelled. At first glance the weed can seem thick enough to entangle a ship's rudder and propellers. But the delicate plants, called sargassum, are too flimsy, and generally too sparse, to endanger a vessel of any size. Tiny pea-size air bladders keep the spiky leaves and twisted stems afloat. Though sargassum may cover many square miles, it only reaches a foot or so below the surface.

Sailing through the Sargasso Sea on the schooner *Westward*, like the merchant mariners who plied these waters in the 1500s we were amazed by the endless patches and windrows of weed. Though we have a much clearer understanding of the currents, winds and waters in these latitudes than did those early navigators, science has only in the past 20 years begun to unravel the mysteries of this unique, open-ocean ecosystem.

The *Westward* is crewed by scientists and students from the Sea Education Association, a research and educational institution in Woods Hole, Massachusetts. She has made research cruises into the Sargasso for more than two decades, studying the biological, chemical and physical properties of the sea.

As we cross the Gulf Stream en route to the Sargasso Sea, the water turns from gray green to cobalt blue; fair-weather cumulus clouds and blue sky replace New England fog. Within a few hours we are across, and well within the sea's domain. The actual boundaries of the Sargasso are difficult to chart. The limits of this two-million-square-mile ellipse of warm, dark-blue water wax and wane

The body of a nudibranch, a kind of snail without a shell (the name means "naked gills"), is difficult to discern in this little clump of sargassum weed.

and can only be roughly determined by sea surface temperatures, the currents that encircle the Sargasso or, less reliably, the distribution of sargassum floating on its surface.

When the breeze dies as it often does here in the mid-Atlantic, the spreading wake of a flying fish or slow scull of a shark's tail may be all that mars the smooth surface of the ocean. Golden windrows of sargassum meander lazily over the surface, rising and falling with the rhythm of ocean swells. Paradoxically, the weed (actually a brown algae) that gives the Sargasso Sea its name covers one of the world's most impoverished stretches of ocean with a deceptively luxuriant veneer of plant life. For oceanographers, the Sargasso Sea is a part of the Atlantic Ocean, from its surface to the bottom. What defines it, however, is a 3,000-foot-deep "lens" of unusually transparent, deep-blue, warm water sitting on the surface. The subtropical heat and the calm winds of a nearly permanent high-pressure system—the Bermuda High—ensure that the surface lens never mixes with the colder water below.

The Sargasso is really the "eye" of the North Atlantic's clockwise circulation, a vast calm area that stretches from the West Indies to the Azores, between 30 and 75 degrees west longitude and 20 to 40 degrees north latitude. It is surrounded by an immense system of currents driven by northeasterly trade winds in the tropics and the westerlies in higher latitudes. Its western border, the mighty Gulf Stream, flows up the Eastern Seaboard of the United States before being deflected off the continent at Cape Hatteras, in North Carolina, and heading east, ultimately turning into the North Atlantic Current. The Canary Current picks up the flow and heads south down the European and African coasts, before merging into the North Equatorial Current, which veers west and rolls on toward North America. The earth's rotation puts a spin on things, urging the currents toward the center of the Sargasso, where they converge in a gradual bulge, hundreds of miles wide, where the surface rises to nearly two feet higher than the surrounding waters. Water in the center of the sea also evaporates faster than surrounding waters, creating a gentle inward surface current that helps keep the floating patches of sargassum—or gulf weed—from dispersing.

The picture of the Sargasso Sea as a stagnant midocean pool of water was shattered in the 1950s with the discovery of cold core eddies, meanders of the Gulf Stream that break free as gyres of seawater, surrounding cores of cold northern waters, and head south into the Sargasso. As much as a

PP. 82-84 HENRY GENTHE

P. PARKS/ANIMALS ANIMALS; P.84,85 GRAEME TEAGUE

hundred miles across and thousands of feet deep, the eddies pack more energy than a large hurricane and carry with them rich continental slope waters. They maintain their integrity for months, even years, slowly decaying as they whirl through the Sargasso like oceanic dervishes. Before its ultimate demise, each ring injects countless tons of fish, plankton and nutrients into the sea.

After logging tens of thousands of miles here, the *Westward*'s scientists and students have studied tons of sargassum. They drag the ocean surface with nets, capturing plants and animals living at the seawater-air interface, and the pollutants that foul their community. Sargassum dominates life here, and when a tow is retrieved, heaps of weed cover the deck. A vigorous shake is likely to dislodge an animated pile of shrimp, crabs, fish, marine insects and jellyfish.

In the age of discovery, Portuguese sailors christened the floating mats of brown algae *salgazo*—a Portuguese term for a particular kind of small grape—of which the tiny floats on the weed reminded them. Columbus described sargassum—or simply "weed," as he called it—with great interest in his logs, confiding that it inspired terror in his sailors. "I saw a great deal of weed today," he wrote on September 17, 1492, and considered it a sign they were close to land. His men, on the other hand, "thought that the weed might become so thick and matted" that they and their ships would be trapped there.

It was not just the threat of the weed that worried sailors—they also cursed the light and variable winds that dominate the Sargasso. It was here—in the "horse latitudes"—that ships were often becalmed for weeks under the Bermuda High and ran dangerously low on fresh drinking water. When seamen found themselves in this desperate situation, the story goes, they pushed horses bound for the Americas overboard in a drastic water-conservation measure.

Long before Columbus encountered the Sargasso Sea in 1492, the Western Ocean's abundance of algae was considered a severe deterrent to navigation. Columbus succeeded as one of the best navigators of his era because, among other practices, he kept a logbook in which he combined the eye of a naturalist with the precise information a captain uses to determine a ship's position and set her course. He recorded water color, clouds over land, migrating birds and the appearance of the familiar sargassum, combining his observations with dead reckoning, which is based on compass course traveled and a vessel's estimated speed. Apparently he made little use of celestial navigation, instead placing faith in his intuition and powers of observation. On his return voyage, for example, he readjusted his course when he noted that his previous notations on the position of the sargassum did not agree with the cal-

Left: The Sargasso anglerfish, usually camouflaged lurking in the weed, is a strange sight in the open. Above: This crustacean is related to the blue crab.

culations he had made using more common methods.

Over the years, the Portuguese word for gulf weed, *sargaço*, emerged from the slang *salgazo*, and finally botanists classified the brown algae under the genus name *Sargassum*. While most species of sargassum live attached to tropical reefs and rocks, scientists have theorized that millions of years ago, violent storms clawed at the shoreline, tearing away clumps of the sargassum that grew there, sweeping them offshore. Buoyed by their air-filled floats, the plants drifted at the surface in the revolving currents of the North Atlantic. Ultimately two distinct species of sargassum proliferated into the millions of tons of weed now adrift in the Sargasso Sea.

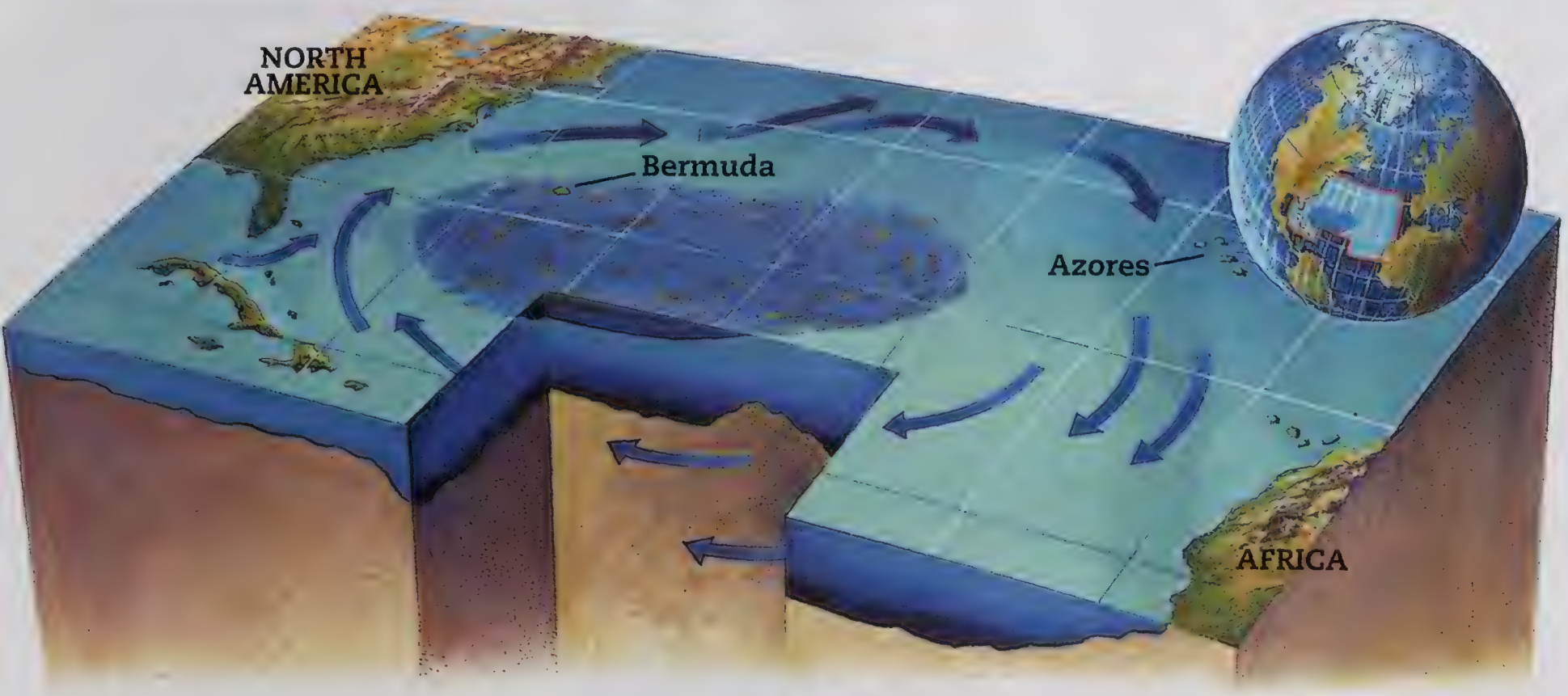
In the open ocean, solid structures such as fishing floats, logs and plastic fragments upon which the microscopic larvae of barnacles and other invertebrates can settle and take up housekeeping are rare. Sargassum plants, with their tangled branches, make perfect hiding places for drifting larvae and small fishes, and have a huge surface area for sedentary animals to colonize. Once the drifting larvae key in on the right combination of chemical tastes and architecture, they dive in and settle down on fronds, stems and bladders, secreting coralline skeletons that dapple the golden plant with white blotches.

Tiny moss animals called bryozoans build rows of boxes laid down like miniature limestone bricks. From within each box, the bryozoan extends a horseshoe crescent of feeding tentacles. Hydroids, coelenterates that are related to corals and jellyfish, fashion delicately branched shrubs decked out with clear vases in which the animals live. *Spirorbis* tube worms cement themselves to the leaves and strain food from the water with heads full of tentacles which, in times of danger, snap back into coiled shells roughly the size and shape of one of the commas in this sentence. The encrusting animals trade mobility for the security of calcium-carbonate chambers and other fixed homes, and strain food from the sea with tentacles or mucous secretions. The sargassum community functions like a living net, sieving out living organisms and dead particles from the surrounding water for larger life-forms at the next rung of the food chain.

A snorkeling expedition into the jungle of seaweed that surrounds the ship brings it all to life. It *is* a jungle down there, a "great resort of animal life" and "one of the most interesting vegetable productions of the sea," as Prof. Mary P. Merrifield, a pioneer Victorian naturalist, wrote in an 1878 issue of *Nature*. Though most of that life is minute, from microscopic to inches across, humpback whales (whose songs were first recorded here), swordfish, dolphins and sea turtles all find their way through the blue Sargasso.

Though most of the smaller animals that remain here probably trace their origins to ancestors living in clumps of ancient sargassum that grew on rocks near shore, their striking conver-

The gold-flecked blue of the Sargasso Sea covers a sizable portion of the central North Atlantic. Ocean currents moving in a clockwise promenade define its boundaries. The cutaway portion (vertically exaggerated) shows the depth of the warm-water lens.



HAROLD SMELCER

ART COLLECTOR

Some artwork you value above all others. That's because it was created by your child. To help protect your budding artist, LeSabre comes with standard anti-lock brakes. Visit www.lesabre.buick.com or call 1-800-4A-BUICK.

GM ©1998 GM Corp. All rights reserved.
LeSabre is a registered trademark of GM Corp. Buckle up, America!

LeSabre by Buick
PEACE OF MIND

gence in color, design and behavior suggests they share a long ancestry afloat in the open sea, where they form a unique, interdependent community.

When I dive in the sea, I'm invariably startled by the bottomless, intense blue. This may be the clearest seawater on earth. Shafts of sunlight from overhead converge around what appears to be my shadow suspended hundreds of feet below. Tiny crustaceans tumble through the void, flickering with iridescent turquoise and purple hues. I know I'm surrounded by planktonic larvae and minuscule plants and animals, but they are invisible. Other than the clusters of seaweed that hang about a foot below the surface, the crustaceans are the only living things in sight.

Even a computer boasting "millions of colors" cannot duplicate the blue of the Sargasso Sea, a color reserved for the eyes of sailors to behold, a shade of the spectrum never seen on land. Its indelible, bottomless cobalt (or azure, or is it indigo or royal blue?) never pales in my memory.

For several hundred feet below the surface, the sea is uniformly warm. A bit farther down, and rather abruptly on an oceanographic scale, the water temperature drops ten degrees or more. The phenomenon is what chilled you to the bone as a child when you dove into the summer swimming hole, which was warm on top and freezing cold just a couple of feet below. The heavier cold water does not mix easily with the lighter surface water that has been warmed by the sun.

In the Sargasso, plants and animals that die at the surface sink into the cold water, where bacteria decompose them. The vast majority of the nutrients that are regenerated don't get a chance to rise to the surface; instead, they are transported by ocean currents to upwellings off the western coast of Africa and elsewhere. A thin soup of luminous dinoflagellates and tiny, solitary diatoms, single-celled plankton plants typical of oceanic deserts, is the only food produced besides the sargassum. During the course of a year, by one estimate, one square yard of the sea's surface measured to the depth where the last rays of sunlight disappear may produce only the equivalent of the grass clipped from a one- or two-week growth on a square yard of your front lawn, not much pasture for grazing herbivores one step up in the food chain. It comes as no surprise that less than 1 percent of the world's fish are produced in marine "deserts" like the Sargasso Sea and the oceanographically similar areas of the central Pacific and Indian oceans.

On voyages through the Sargasso I have dragged hooks on bone jigs,

The shrimp *Hippolyte coerulescens*, transparent in the middle of its back, the structures around its eyes, and its legs and tail, performs its own type of disappearing act.

D. SHALE/OSF/ANIMALS ANIMALS

IMAGEANYWARE™ is a service mark of Canon U.S.A., Inc. ©1998 Canon U.S.A., Inc.

Our color laser copiers and printers reproduce subtle colors perfectly on any network – even a color as elusive as trust. It's what has set us apart since we introduced laser color eleven years ago. Canon Laser Color. Its only competition is reality.

IMAGEANYWARE™

1-800-OK-CANON, www.usa.canon.com

Canon

feather lures and plastic squid for thousands of miles in the ship's wake, seeking mahimahi or tuna. Trolling for dinner out here is mostly a lost cause. When the rare fish does strike, it's usually within sight of a windrow of sargassum. In the open ocean, meal-size fishes forage around drifting objects where smaller fishes seek cover.

In the centuries since Columbus, navigators have kept a lookout for the appearance of sargassum as a welcome home to familiar waters. On a return voyage from the Antarctic whaling grounds in 1844, after several years at sea, William Bussey Macy, captain of the whaling ship *Arethusa*, wrote in his journal: "The equator is crossed and now how we check off the degrees of latitude, day by day, as we run them up in the Northeast trades. For we are on the home side of the line. How eagerly we hail the first patches of gulf weed."

Many of the animals look more like plants, a sign that they are not a ragtag bunch of weird animals swept out to sea by a passing hurricane, but a stable community.

Oceanographers have spent years learning ways to chart the Sargasso Sea, but it may be that eels have an instinctive feel for its boundaries. Animal senses can be more attuned to the trace elements present in a body of seawater than the finest instruments. Salmon migrations are the best-known example, but each year millions of eels from the rivers of Europe and North America are thought to migrate to the Sargasso Sea to spawn. Exactly where they go remains one of nature's great unsolved mysteries, since few if any adult eels have ever been found there. Some scientists have theorized that they swim into the deep sea, where they lay their eggs, die and decompose, leaving no trace until their transparent, leaf-shaped larvae hatch and wriggle to the surface. The strange leptocephalus, or slim head, looks so little like an adult eel that it was once classified as a new species of fish. Drifting homeward, it can spend perhaps one year or more en route to America, or more than two years to Europe. When the leptocephalus detects the chemical signature of the adult's home river, it heads into fresh water where it metamorphoses into a recognizable eel and swims weakly upstream, slowly maturing into the adult eel that is considered such a delicacy in Europe.

Had Charles Darwin traveled through the Sargasso Sea on the *Beagle* instead of heading south from England and down the coast of Africa, he might have saved himself several years of voyaging and the seasickness that plagued him throughout his expeditions. For the Sargasso is a stage where the drama of adaptation and evolution is played out clearly, before even a layman's eyes.

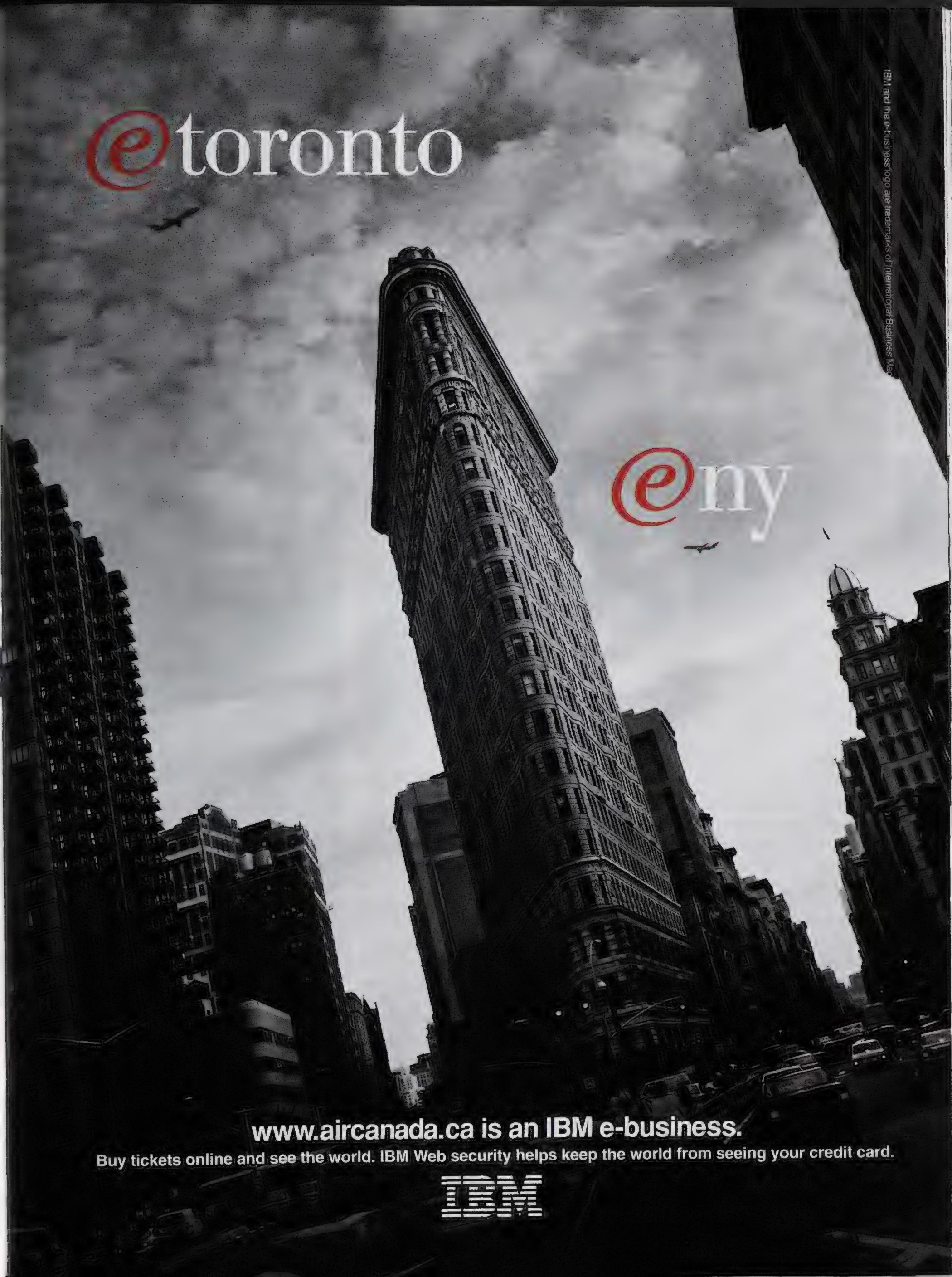
Of the hundred-odd species of animals in the sargassum community, at least a dozen invertebrates and two species of fish have adapted so well to the floating sargassum that they seem to have evolved here. They are so intimately connected to the weed and mimic its color and structure so precisely that many look more like plants than animals—a sign that they are not a ragtag bunch of weird animals swept out to sea by a passing hurricane, but a stable and self-perpetuating community. Finding animals concealed in this floating jungle is a daunting prospect—like those childhood challenges to see how many animals one could find in a picture of the forest. Any creature not completely hidden is likely to become a meal for a predator. For the most part, animals here keep a tight grip with claws, suction cups or slimy feet, entwining themselves tightly in sargassum branches or permanently cementing themselves to the stems, floats and leaves.

At least two species of fish call the sargassum home throughout their lives. The slender, elongated, four-inch pipefish, a relative of the sea horse, bears a striking resemblance to a tendril of sargassum and stalks shrimp by slithering through the weed like a snake in the grass. But *Histrio histrio*, the Sargasso anglerfish, is the sea's most renowned denizen. It has evolved and prospered here among the algae using a combination of camouflage, cunning and ferocity.

A golden brown accented with blotches of white, it perfectly matches the color and pattern of the weed. Leafy flaps of skin mimic sargassum leaves and disguise the fish's outline. With fins that look like stubby arms, and fin rays splayed out like hands, it crawls, more than swims, through the weed, grasping sargassum stems and pulling itself along through the offshore forest. But most of its time it spends hanging motionless, its rotund gold-and-white three-inch body disappearing into the background as it waits to ambush passing game.

The anglerfish's only movement is the wriggling of a tiny worm-like flap of skin, a built-in form of bait that it dangles from the dorsal fin, luring crustaceans into striking range. With one of the fastest oral expansion capabilities known in fishes, and a jet-like suction developed by pumping a blast of water through the small opening in its gill cover, the invisible anglerfish inhales any animal that wanders near. Like most predators in the Sargasso,

PP. 92-93 JOHN D. CUNNINGHAM/VISUALS UNLIMITED; P. 93 DOUG PERRINE/DRK PHOTO


e toronto
e ny
IBM and the e-business logo are trademarks of International Business Mac
www.aircanada.ca is an IBM e-business.
Buy tickets online and see the world. IBM Web security helps keep the world from seeing your credit card.
IBM

it will eat whatever comes along—including its own kind—as long as the prey fits into its gaping mouth.

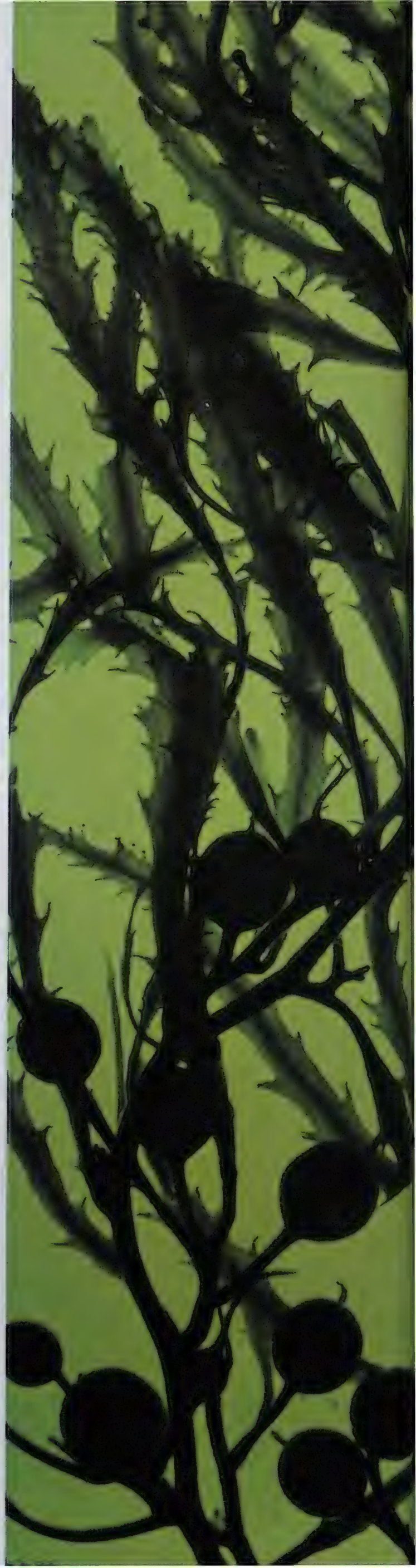
On one memorable afternoon dive I was combing through a small clump of weed in search of animals to photograph and noticed a glint of metallic green: a reflection from the retina of an anglerfish's eye, the only hint of color that revealed its presence. With a couple of vigorous shakes I dislodged the fish, dropping it into a world of blue. I knew that, caught in open water, the anglerfish's gold-and-white camouflage would read like a target to any passing predator. I held the clump of weed in front of its grotesque face and am certain that I saw an expression of relief in those green eyes as the creature darted home to its cover of sargassum, where it instantly vanished.

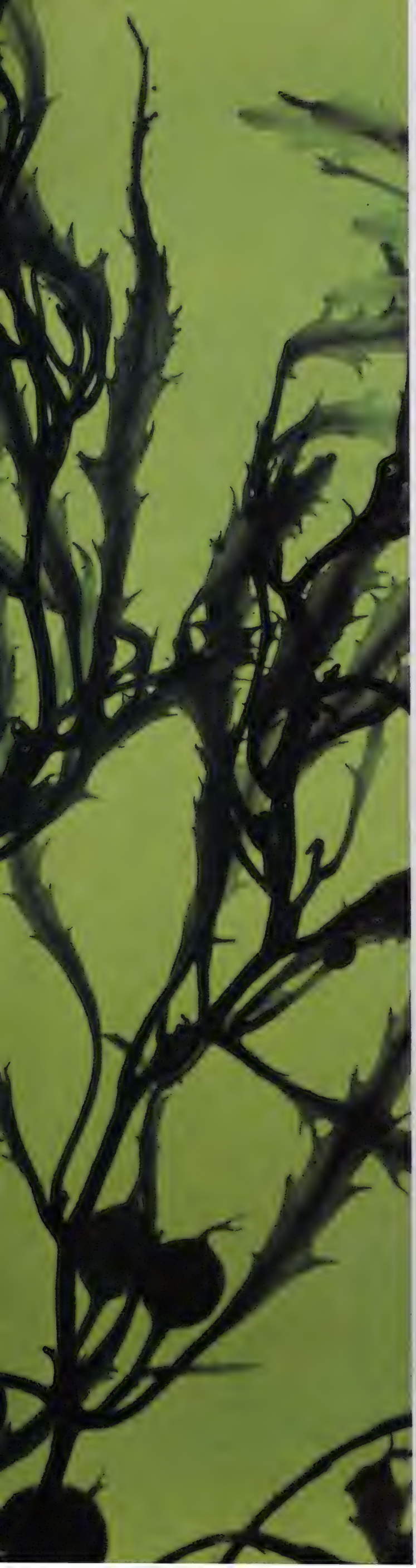
Clumps of sargassum drift downward, carrying the bodies of animals and plants into the perpetual darkness, crushing pressures and bitter cold.

At least two species of shrimp also hold their own in the competitive world of the sargassum. While they are juveniles they protect themselves by mimicking the architecture of the weed. When young, *Latreutes fucorum* looks like a leaf, and *Hippolyte coerulescens*, like a round pea-size float. After outgrowing the first disguise, they develop and rely on the basic camouflage colors typical of most animals that live here. In addition, *H. coerulescens*, which is much larger now, loses pigment around its mid-body and can end up looking more like a pair of gold floats than a single oversize one—and not much at all like a shrimp. Its swimming legs and tail also lose their color, completing the deception. *L. fucorum*, too large now to fake it as a leaf, fools predators with a new color scheme. Instead of its drab juvenile brown, it changes to the familiar gold and white, and even sports stunning patches of iridescent blue that mimic the view of the open sea a stalking predator might see as it searches the weed for prey.

Portunid crabs, small gold-colored relatives of the renowned blue crabs of the Chesapeake Bay and gourmet restaurants, are cantankerous critters and joust with anything that approaches, lashing out with sharp claws at pipefish, other crabs and underwater photographers with equal enthusiasm. Nudibranchs (SMITHSONIAN, August 1989), sea slugs with flaps of skin on their backs, stick gold clusters of perfectly camouflaged eggs to the weed with mucous secretions. Worms of several varieties creep through the weed, snacking on bacterial slime, clumps of fungi and tiny colonies of sedentary diatoms.

Sargassum does not live and drift forever—if it did, the sea would indeed become choked with weed. As a clump of sargassum ages, its golden-brown color deepens to tan or even black. Fronds, floats and leaves become so heavily weighted with an accumulation of encrustations from the resident creatures that the ballast overcomes the buoyancy of the air bladders, and the clumps of weed begin sinking toward the seafloor. As they sink, the increasing pressure crushes their floats. The clumps, carrying the bodies of animals and plants, go into a free-fall into the perpetual darkness and bitter cold of the deep sea. Most fishes, shrimps and crabs desert their sinking ships in favor of more buoyant sargassum





rafts. But sedentary animals, cemented to their home of weed, are doomed to sink and decompose with their host in the depths.

Deep in the never-ending night, wandering scavengers patrol the rolling plains of the seafloor in their search for the remains of plants and animals, manna from the surface waters above. With no light, there can be no photosynthesis here, and all nourishment and life depends on "food falls" from the surface. Highly adapted scavengers inhabit this grim place. Giant isopods, resembling garden sow bugs, a foot or more in length; amphipods related to beach fleas and sand hoppers; and crabs with long spindly legs creep, hop and pick their way over the bottom, following chemical trails to dead organisms. Coming upon a cetacean carcass (a whale fall) must be the equivalent of hitting the lottery to these creatures, who depend mostly on tiny pieces of detritus for sustenance. Many scientists think that a reliable complement to the feast of dead whales and fishes may be the withered clumps of sargassum that have broken away from surface tendrils and settled onto the muddy plains of the abyss, where they are set upon by the bizarre nomadic scavengers. Even brittle starfish, scavengers that usually feed on tiny bits of organic debris, have been found with sargassum floats stuffed into their guts.

Far above, motes of sunlight filter through waving forests of sargassum, alive with cryptic creatures. Though bits of plastic and tar balls drift through the weed, there are relatively few traces of human damage here in a place where life has changed little since the days of Columbus.

We set a course for the Azores. And with the wind on her beam, the *Westward* crosses row after row of sargassum being swept toward the horizon on spiraling currents spawned by the wind.

Left: Round air bladders keep sargassum's spiky leaves and twisted stems afloat. Above: A loggerhead turtle yearling hides among clumps of the weed.

Marine biologist Henry Genthe has crossed the Sargasso Sea six times. He wrote about sponges for SMITHSONIAN *in August 1998.*

Wear **sweats**

Someday I plan to: Go to film school. Shop flea markets in Paris. Get my piano tuned. Finish a marathon (in under six hours).

Plan for the future.

Over 150 mutual funds

3, 4, or 5 star Morningstar Overall Ratings on 82% of our rated funds

50 years on Wall Street

Dreyfus

RULE YOUR KINGDOM℠

Call 1-800-782-7411 for a Prospectus containing complete information including charges and expenses on any Dreyfus fund. Please read it carefully before you invest. Past performance is no guarantee of future results. Bond and equity fund share price and investment return fluctuate so redemption value may be more or less than original cost. As of 8/31/98, of the 87 Dreyfus funds rated, 17 received 5 star, 27 received 4 star and 27 received 3 star Overall Ratings. Morningstar proprietary ratings reflect historical risk-adjusted performance and are subject to change every month. Ratings are calculated from the funds' 3-, 5- and 10-year (as applicable) average annual returns in excess of 90-day Treasury bill returns with appropriate fee adjustments, and a risk factor that reflects fund performance below 90-day T-bill returns. The top 10% of funds in a rating universe receive 5 stars, the next 22.5% receive 4 stars and the next 35% receive 3 stars. ©1998 Dreyfus Service Corporation, Broker-Dealer. Premier Mutual Fund Services, Inc., Distributor

JACKSON POLLOCK

MODERNISM'S SHOOTING STAR

BY PHYLLIS TUCHMAN

WHEN JACKSON POLLOCK DIED in a car crash in August 1956, the 44-year-old artist hadn't made a painting in over a year. During the previous two and a half years, Pollock had executed only four significant pictures, but he seemed ready to get back to work. He had just put in a supply of canvas and paint; and he finally had installed lights in his studio, a former barn, on Long Island. In a few months he was to become the first artist of his generation—the then-

emergent Abstract Expressionists—to be honored with a mid-career survey of his work at the Museum of Modern Art in New York.

In December 1956, as planned, MOMA mounted a spectacular exhibition of 35 paintings and nine drawings and watercolors by Pollock. The show, however, had become a memorial to the most important abstractionist in American art history, then as well as now. According to no less than Willem de Kooning, the Dutch-born painter to whom Pollock is most often compared in terms of both stature and influence, and who just died last year at the age of 92, "Jackson broke the ice." These four words describe the story of American art during the 20th century more fully than any book ever written on the period or its legacy.

With several astonishingly eloquent wall-size paintings done in 1950, Pollock did something few other American artists have ever achieved: he showed how an abstractionist could make beautiful, profound, enigmatic, graceful canvases endowed with poetry and meaning. These "portable murals" are as fresh and original today as they were when they were made, almost 50 years ago. This will be evident November 1 when *Autumn Rhythm, One, Number 32* and *Lavender*

Pollock embellished the dense, mural-size surface of *Blue Poles: Number 11, 1952* with a rhythmic series of tilted verticals. The iconic figures (insets, left and following) are details from drawings he made c. 1938.

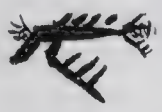
An early Pollock oil, *Seascape* (1934) depicts a scene from Martha's Vineyard. The all-over composition and almost abstract rendering of the sea prefigure his later canvases.

Mist, along with 150 other canvases and works on paper executed by Pollock in a career of approximately 25 years, go on view at the Museum of Modern Art in New York. The exhibition runs through February 2, 1999.

Pollock retrospectives are rarely mounted. Baby boomers were still in school when the last one was done in New York in 1967, again at MOMA, ten years after the first survey. Until this current exhibition, the only other extended, in-depth look at Pollock's career was put together by the French at the Centre Georges Pompidou in Paris in 1982. Because the paintings are large and fragile, many owners are hesitant to lend them. Also, the insurance premiums are huge. Since fewer and fewer Pollocks remain in private hands, they keep increasing in value.

During his lifetime, Paul Jackson Pollock was almost always poor. Born in Cody, Wyoming, on January 28, 1912, he was the youngest of five sons. His parents, who met in Iowa, married in Nebraska and moved on to Wyoming, had a hard time making ends meet. Short, dark and handsome, LeRoy Pollock was variously a stonemason, cement worker and surveyor who tried to run a series of failing farms in Arizona and California.

Stella Pollock, a robust matriarch with a fair complexion and light-brown hair, cooked, cleaned and made clothes for herself and her sons. The boys did the chores. They weren't athletes; instead their mother encouraged them to be creative. Three became painters, one was a horticulturalist and one worked as a rotogravure etcher.



THOUGH HE WAS GROWing up on the land, young Jack, by the time he was 10, already knew a more sophisticated world existed. In 1922, Charles Pollock, the oldest of the boys, got a job in the layout department of the *Los Angeles Times* while studying at the Otis Art Institute. Four years later, after moving to New York to attend the Art Students League and work with Thomas Hart Benton, who would soon emerge as America's leading Regionalist artist, Charles would suggest in his letters home what should be seen and read.

The future Abstract Expressionist was an indifferent student who for a variety of reasons kept getting expelled from high school. In Riverside, California, he was kicked out of the local high school's ROTC program. When the family moved to Los Angeles in 1928, he entered Manual Arts High, where he became friends with two like-minded teens, Philip Guston, né Goldstein, then an aspiring cartoonist, and another would-be artist, Manuel Tolegian. There, too, he was taken under the wing of his art teacher, who, besides nourishing Pollock's talent, would introduce him to theosophy, the teachings of Krishnamurti and extrasensory perception.

This round, Pollock got himself expelled for distributing a broadside attacking athletics. "Instead of yelling 'hit that line,'" Pollock maintained, "we should cry, 'make that grade.'" After being reinstated and expelled once more, he had time to pursue other interests. At the Los Angeles County Museum of Art he noticed *Día de la flor*, a painting from 1925 by the Mexican artist Diego Rivera. To his two brothers living in New York, he wrote: "I became acquainted with Rivera's work through a number of Communist meetings I attended after being ousted from school last year. He has a painting in the museum now." This picture, with its amply scaled shapes, limited vocabulary of forms and abundance of curves, features flowers and figures that fill the entire canvas. The "apathetic" student mentioned to his brothers how he had "found the *Creative Art* [magazine] of January 1929 on Rivera," adding, "I certainly admire his work."

Readmitted to school to study part-time, Pollock, with Charles, who was visiting, went out to Pomona College

NS: MUSEUM OF MODERN ART, NEW YORK
SANTA FE; PP 96,97 NATIONAL GALLERY OF AUSTRALIA, CANBERRA; ICO

WITHOUT A CENTURY OF TRUCK EXPERIENCE,

A LUXURY SUV

IS JUST A

LUXURY V.

The new

ENVOY

©1998 GM Corp. All rights reserved.

A sport utility is, by definition, a truck. Since 1902, GMC has provided trucks and nothing but trucks for people whose jobs and lives depend on them. And while the new Envoy™ has comfort and technology that rival the most luxurious of vehicles, it is also built with the belief that the greatest luxury an SUV can have is capability. Call us at 1.888.ENVOY.4.U or visit www.envoy.gmc.com.

GMC®

Do one thing. Do it well.®

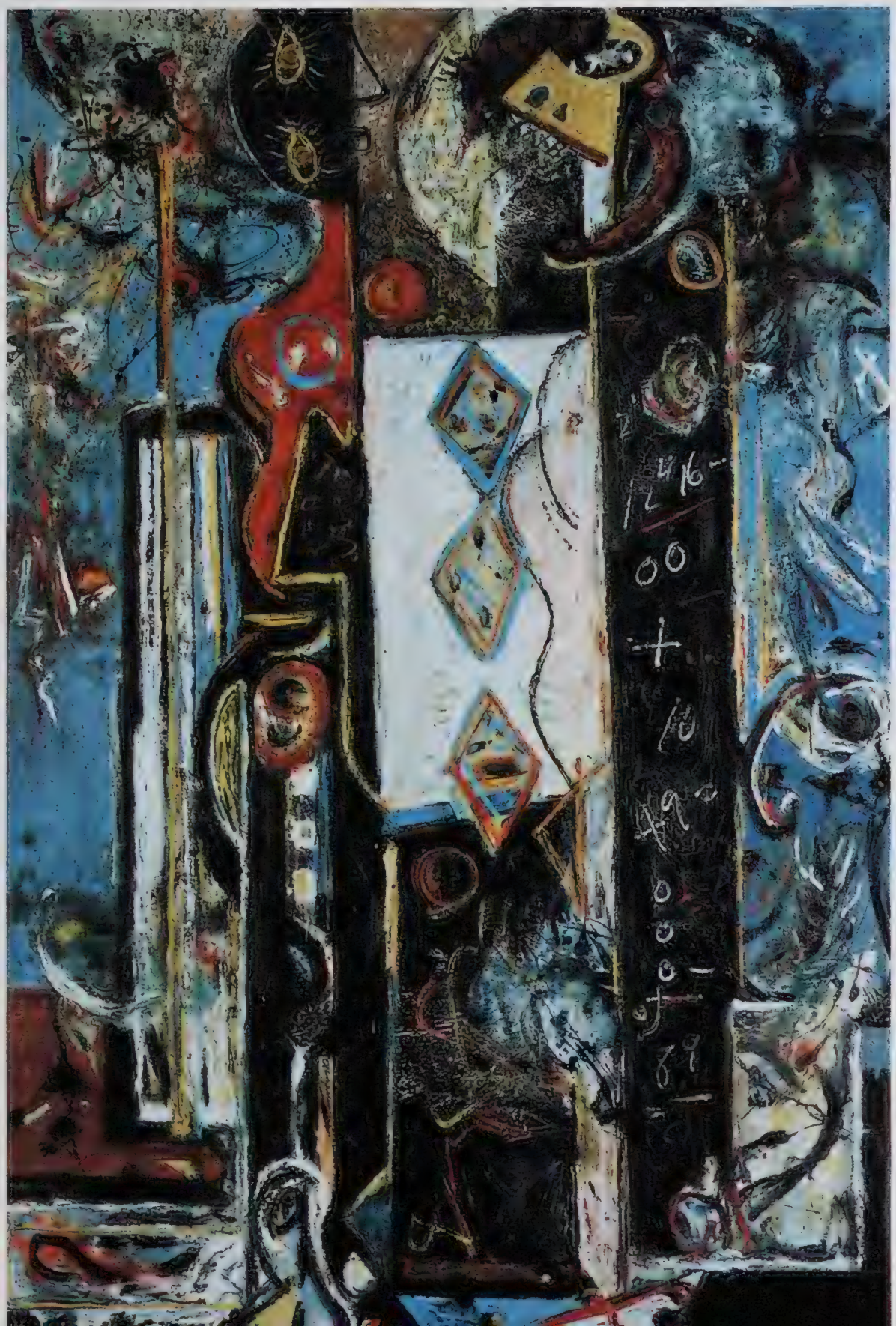
in Claremont, east of Los Angeles, to see José Clemente Orozco's new mural, *Prometheus*. This other important Mexican artist had depicted a 20-foot giant dominating a composition of a doomed world populated by a throng of much smaller figures. On his own, the teenager trekked to Pomona several times to view the fresco.

THAT FALL, POLLOCK JOINED his brothers in New York. He later told his friend sculptor Tony Smith that he had come to New York to learn "to sculpt like Michelangelo." To that end, Pollock, now all of 18, went to Greenwich House to study stone carving. He also registered at the Art Students League and, like his brother Charles, hit it off with the 41-year-old Benton. For five semesters, the high school dropout studied with the famous Missourian. He joined in evenings of music making at Benton's home, baby-sat for his son, became a class monitor and, after Benton left the League to paint the mural commissions then finally coming his way, spent summers with the family on Martha's Vineyard. On Benton's property, overlooking Menemsha Pond, Pollock converted a former chicken coop into "Jack's shack"—his own studio. One of the earliest paintings in the MOMA retrospective is a scene from Pollock's time here (p. 98) that calls to mind the work of another favorite of the young artist, Albert Pinkham Ryder, the creator of moody, nocturnal seascapes.

Yet it was the ideas that Benton outlined in five articles published in *The Arts* in 1926-27, entitled "Mechanics of Form Organization in Painting," that were to make the most lasting impression on his protégé. In these pieces, Benton analyzed ways to distribute multiple figures laterally across broad fields. But instead of using recognizable images in his diagrams, he introduced a series of lines and geometric forms to represent the figures. By doing this, he also achieved visual rhythms. It would be years before Pollock grasped Benton's notions more completely than anyone else, including his teacher. Just a hint of Benton's impact is apparent in drawings from Pollock's sketchbooks that are included in the current MOMA survey. These books contain studies, based on old master paintings by El Greco, Michelangelo and others, in which one finds figures grouped representationally and then massed more abstractly.

Over the years there would be other mentors, little money, continual bouts with alcoholism, marriage to a talented painter, who would put her own career aside to nurture his, and rave notices from one of the most important art critics of the century—

Male and Female **(1942) reflects the influence of Picasso and European modernism. In the splashes and swirls of color at top left one can see hints of Pollock's later "drip" paintings.**



JBL

THIS SPORTY LITTLE COMPACT IS LOADED.

After decades of creating the world's finest sound systems, JBL introduces an exceptional, multi-function stereo on one snazzy little chassis for less than $400. Introducing Harmony™ by JBL. CD player, AM/FM tuner and 40 powerful watts that can fill any room with rich, full JBL audio. (Oh, and it's got dual alarms and snooze bar.) At just 12" x 10" x 8", it sounds better than stereos three times its size by re-creating music across a uniquely wide sound stage with exceptional stereo separation.

For literature/dealer locations: 1-800-336-4JBL or www.jbl.com

©1998 Harman International

JBL is one of the great brands of Harman International H HEAR US EVERYWHERE.

Totemic forms flank an ovoid beast bearing a stick-like figure in *Pasiphaë* (1943). Though it references the tale of the Minotaur, its fragmented imagery borders on abstraction.

Clement Greenberg. While Pollock never went to Europe, never saw in person Michelangelo's Sistine Chapel, Rubens' Marie de Médicis cycle in the Louvre or the Titians in Madrid, he knew how these masters styled their images, created action and got their meanings across. He had taught himself to recognize when a painting or sculpture "worked," his shorthand for two thumbs up.

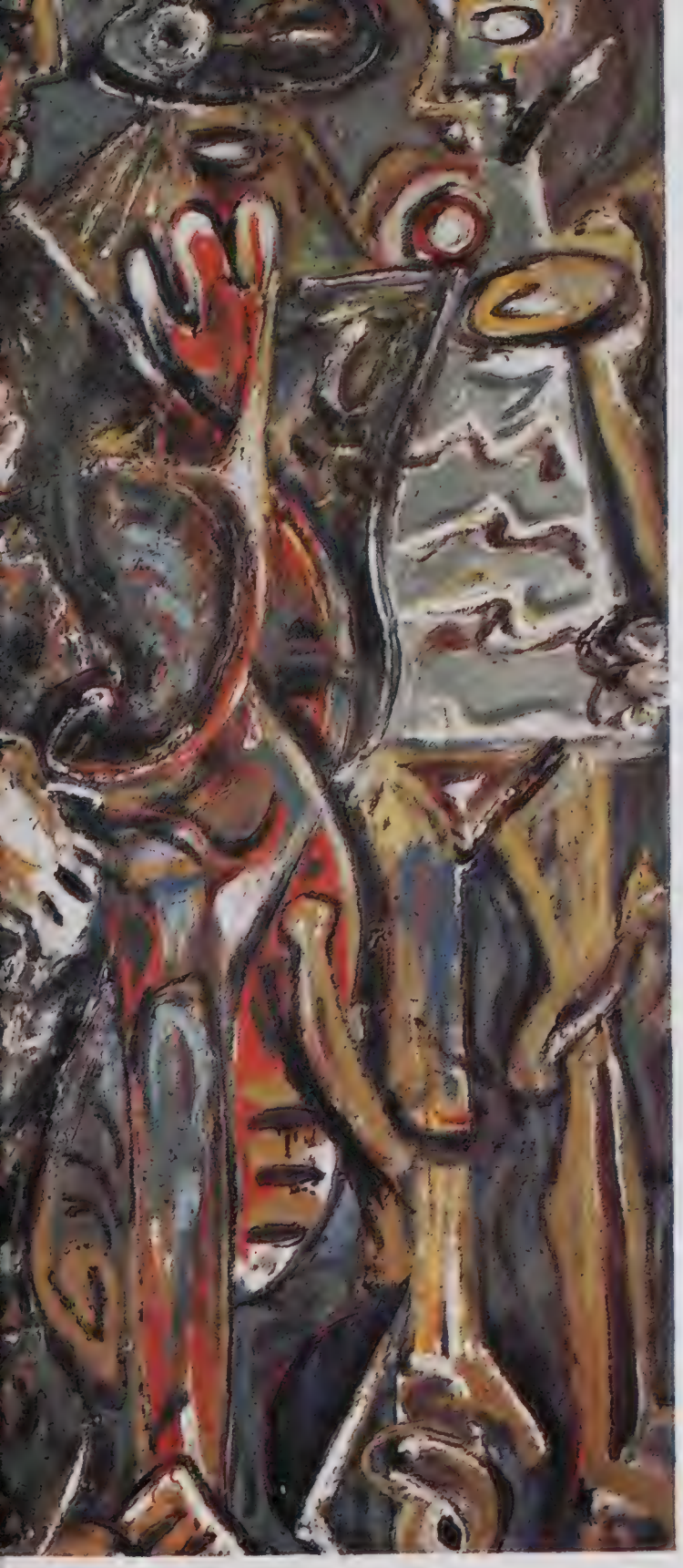
About the perspective he garnered traveling across Depression-era America by boxcar, and Model-A Ford, Pollock once said, "You get a wonderful view of the country from the top of a freight car." Like the great landscape painters of the 19th century, he, too, drew vistas large and small—it's just that his were along Route 66.

Beginning in 1935, and almost continuously for seven years, Pollock, like his contemporaries, eked out a living working for divisions of the Works Progress Administration (WPA). As a 24-year-old in 1936, he also became acquainted with David Alfaro Siqueiros, another great Mexican muralist, who ran a workshop in Union Square where artists experimented with spray guns, airbrushes and synthetic paints. And after reading "Primitive Art and Picasso" in the April 1937 *Magazine of Art*, he got in touch with its author, John Graham, a charismatic, visionary artist. Their friendship expanded his circle.

When Pollock's drinking got out of hand during the summer of 1938, he was hospitalized. Released about four months later, he saw several analysts over the following years. His treatment tended to be unorthodox. For example, with one young doctor he would discuss drawings he had executed in the spirit of Picasso and the Mexican muralists.

Late in 1941 John Graham invited Pollock to participate in a group show he was organizing in which American artists such as de Kooning

METROPOLITAN MUSEUM OF ART, NEW YORK



and Stuart Davis would appear with the likes of Matisse, Braque, Bonnard and Picasso. Lee Krasner, a New York painter who had studied with the legendary abstractionist Hans Hofmann, was also slated to exhibit in the show. She later said, "I thought I knew all the abstract artists in New York." But she insisted that she had never heard of Pollock. Impulsively, she knocked on his door one day. About five-foot-eleven, he conveyed the impression of being even taller, perhaps because he was big-boned, had a strong face and heavy, powerful hands. Within a year the two painters were living together in his apartment at 46 East 8th Street in Greenwich Village.

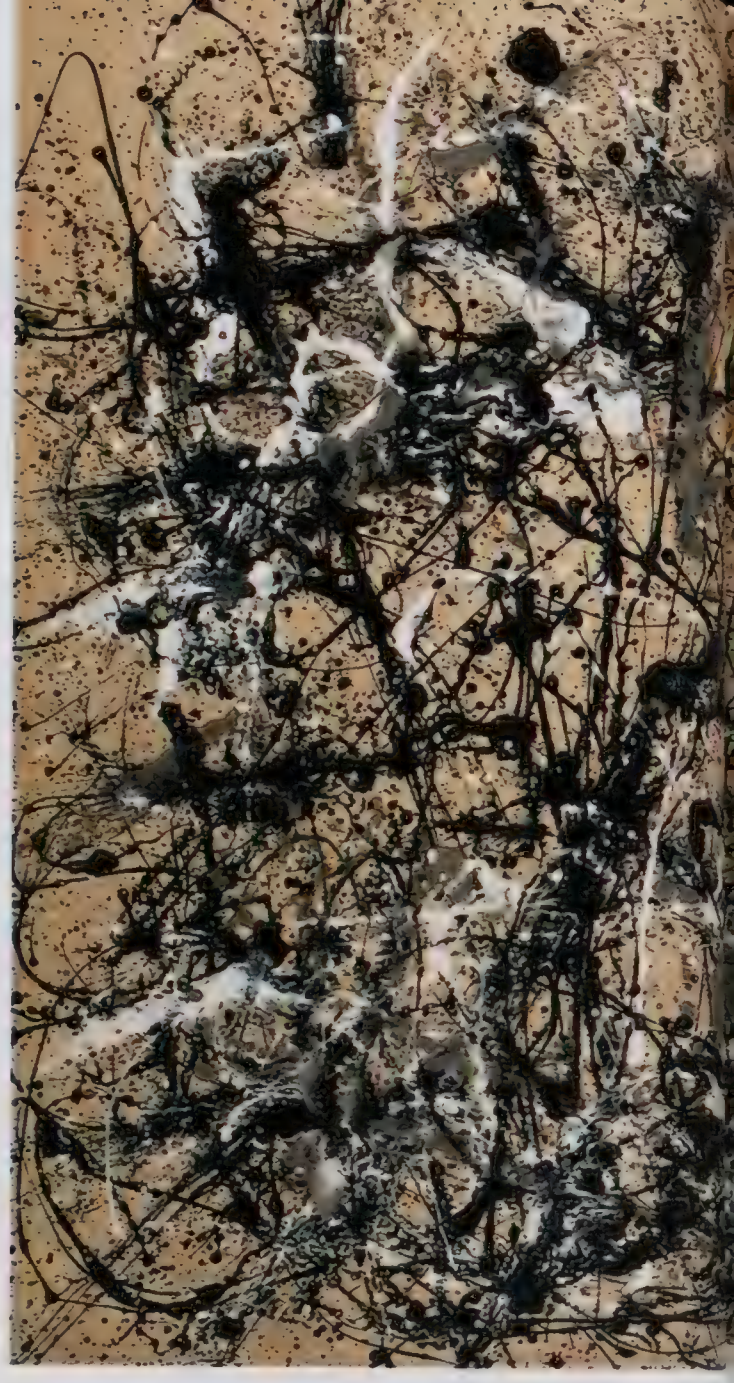
Krasner, the sixth of seven children raised by Russian-born Orthodox Jewish parents in Brooklyn, truly did know everybody. Introducing her new companion could be an adventure, however. Having been told that Pollock "worked from his heart," Hans Hofmann suggested that he come to his school and work directly from nature. "I am nature," replied Pollock, as if he were Prospero in Shakespeare's *Tempest*.

Like a number of European Surrealists and other modernist artists, dealer Peggy Guggenheim settled in New York soon after World War II began. Having decided to organize a juried show, she found herself discussing Pollock's *Stenographic Figure*, a horizontal work from c. 1942, with the Dutch abstractionist Piet Mondrian. "Awful. Dreadful, isn't it?" she asked. But Mondrian eventually answered, "I believe it's the most interesting work I've seen in America yet." Guggenheim changed her mind. And after the exhibition opened, Pollock won acclaim from eminent critic Clement Greenberg, who would become his greatest champion, and from others as well. Next Guggenheim invited Pollock to have what would become the first of four solo shows in her gallery, Art of This Century. (When she closed her space, he would move on to Betty Parsons; thus, in eight years he had nine one-person shows in New York.)

Guggenheim also commissioned from Pollock a mural for her town house. Now in the University of Iowa Museum of Art, it is the largest work he ever painted. Originally intended for exhibition in his first show at her gallery, the piece was so large that Pollock had to knock out a wall in his apartment to make it. He contemplated the bare canvas for hours on end, but the show came and went before he finally, in just one day, covered the entire surface of the work with a series of rhythmic strokes that suggests a group of figures. "I had a vision," Pollock reportedly told a friend, "It was a stampede." The parade of black marks across the canvas also calls to mind the diagrams Benton first published in 1927 and some of the steel sculptures David Smith would weld during the 1950s.

IN THE EARLY '40S, A NUMber of artists who would later become known as Abstract Expressionists or members of the New York School were painting quasi-abstract images inspired by Greek mythology. Pollock never opted for anything as erudite or delicate as the images of Mark Rothko, Adolph Gottlieb or Barnett Newman. The pictures in his first show with Peggy Guggenheim were denser, with imagery stretching from edge to edge, and entire surfaces animated by forms that seemed familiar but somehow undecipherable. His palette was darker, too. To paint *The She-Wolf*, he used an easel and traditional brushes, but he also put the canvas on the floor and dripped color onto it. While art historians have identified the subject with the story of Romulus and Remus, Pollock probably had American Indian sources in mind in much the same way that Mexican muralists appropriated Pre-Columbian imagery for their frescoes. *Male and Female*, *Guardians of the Secret* and *Pasiphaë* (left) also tellingly reveal how Pollock blended all sorts of ideas into his unified works. Variously one can detect whiffs of Picasso; American Indian symbology; Jungian archetypes; and murals by Benton and Mexican artists such as Rivera. Carried off masterfully and with panache, these classics of 1942 and 1943 are uniquely Pollock.

In October 1945, Pollock and Krasner married. Having visited an artist



With a slight twist of the wrist, Pollock drips paint onto one of his wall-size canvases as his wife, artist Lee Krasner, looks on. The photograph was taken in 1950 by Hans Namuth.

friend whom he had known since his days in Riverside, Pollock decided to move permanently to The Springs, a rural community on Long Island, near East Hampton, whose backwoods character is little changed today. Money borrowed from Peggy Guggenheim helped the couple buy a small house facing Accabonac Creek.

After the initial cleanup, a routine set in. As Pollock once put it, "Painting is not a problem; the problem is what to do when you're not painting." And he worked in spurts. He'd rise late, often having slept for 12 or 14 hours. As Krasner ate lunch, he had his breakfast. If he wasn't working in the garden, he might be baking bread or pies. At some point, he rigged up a special sound system for his record collection, which ranged from readings by James Joyce to the music of Louis Armstrong. According to Krasner, Pollock "thought [jazz] was the only other really creative thing happening in the country." There were his books, too. In his extensive home library, Camus and Proust share shelf space with Dante and Whitman; works by Freud, Jung and L. Ron Hubbard are mixed in with books on El Greco and Miró. And, if he wanted to know anything about Native Americans, Pollock owned 12 volumes of a set of reference books published at the turn of the century by the Smithsonian Institution.

POLLOCK LOVED, ALSO, TO GO to the beach, day or night. He would drive all the way out to Montauk or just ride a bike to Louse Point, an enchanting spot favored by de Kooning, who became a neighbor. Tony Smith related how "on clear nights we would get out of the car and look at the stars." In an article from 1951, painter Robert Goodnough stated that Pollock's art "may be thought of as coming from landscape," and suggested that viewers might even be reminded of "the movement of the stars—with which he seems almost intimate at times."

Five months after he and Krasner moved to the country, the 34-year-old Pollock held his third solo show at Peggy Guggenheim's Art of This Century. He painted a number of the pictures at his new home. During the night he'd hear the sounds of birds, insects or an occasional fox from his windows; and the next day, in a converted upstairs bedroom, he'd work on his paintings. In preparation for his next show, Pollock began two series of works. One was more refined, more colorful and more Cubist than anything he had done. The other had a muscular quality with swirls of paint forming heavily impastoed surfaces. One large picture, *The Key*, which resembles a fragmented Picasso colorfully painted by Matisse, was

HANS NAMUTH

Lines of color are interwoven to create a sense of lively harmony in *Autumn Rhythm.* "My paintings . . . depend on the same amount of interest throughout," Pollock once said.

entirely executed with the canvas on the floor.

Having cleaned out the old barn that came with the five-acre property, the new owners had it moved—it had been blocking the view to the water. Once a large new window was punched high into the north wall, Pollock started to work in the unheated, unlit studio. If it was cold and Pollock wanted to do some work, Krasner later recalled, "he would get dressed up in an outfit the like of which you've never seen." He was so assured and confident, he hardly ever abandoned a canvas he was having trouble finishing. The dimensions of his paintings grew in size, while the internal scale of his forms got larger, too. Surfaces became airier; his touch lighter. The imagery appeared to get more and more abstract.

In the fall of 1948, Pollock fell off his bike and went to the nearby medical center. By the time he left, a new young physician had convinced him to stop drinking and to come regularly to his office. Tragically this talented doctor died in a car accident in early 1950, but for two years Pollock was on the wagon. During this period, he painted his greatest artworks.

Pollock's reputation spread so quickly beyond the confines of the art world that several photographers, including Martha Holmes of *Life* magazine, came out to his studio to record what he was doing there. Their timing was uncanny. He had then begun working on his breakthrough "drip" or "poured" paintings, huge portable murals that he created by dripping Duco and other house paints—black, white, silver, taupe, teal—from hardened and worn-out brushes, sticks and such onto cotton duck canvas spread across the studio floor. To explain how these wall-size paintings were made, Pepe Karmel—an adjunct assistant curator who worked on organizing the MOMA retrospective with Kirk Varnedoe, chief curator of the department of painting and sculpture—had fed into a computer a variety of stills and outtakes from a film shot by Hans Namuth, a photographer who lived in nearby Water Mill. Analyzing the resulting images, all of which were taken between July and November 1950, Karmel discovered that Pollock's greatest paintings were not as abstract as they have always been assumed to be.

In his catalogue essay, Karmel describes how Pollock, with a series of fluid lines, drew loopy figures and animals across the first layer of these astonishing pictures. While representational, they are not lifelike. If anything, they resemble the quirky drawings, some with several scenes to a sheet, that Pollock had made years earlier. Also, the artist distributed what Karmel calls a "series of self-contained configurations" across the

METROPOLITAN MUSEUM OF ART

unstretched surfaces, as if he were heeding Benton's composition lessons—or putting down preparatory marks for a fresco.

ONCE THE PAINT DRIED, POLlock connected the spread-out shapes with darker, thicker slashes of pigment. Again, he would wait for that session's efforts to dry. The next tier would probably also be nonfigurative, but not necessarily so. There were no hard-and-fast rules, but eventually the painting would emerge as an abstract, all-over composition. To be sure, the painting's thickest elements appeared closest to viewers, suggesting a relation to traditional perspective and deep space. Moreover, shiny pools of black and white and occasional threads of aluminum paint reflected light and animated whole sequences of nonrepresentational design.

Reading Karmel's description of the imagery is a bit like standing next to a friend who is pointing out how the stars can connect into the wonderfully mythic forms that have been admired by all cultures and civilizations. Pollock may have had just this notion in mind. Shortly before he started to use numbers rather than words to designate one painting from another, he variously titled a group of works from 1947 *Reflection of the Big Dipper*, *Comet*, *Shooting Star* and *Galaxy*. He'd previously used the words "night" and "moon" for several others. And about *Portrait and a Dream* (below), Lee Krasner has indicated that the "dark side of the moon" is depicted in the upper-right area of its left section. Perhaps when Pollock thought about what it would be like to look up at Michelangelo's Sistine ceiling, he associated such an action with craning toward the heavens at night. In his majestic canvases Pollock appears to have been creating simulacra of the cosmos in constant motion. Thus his explanation that in his art one finds "energy and motion made visible."

During the following years, Pollock continued to express these interests, but he avoided explaining what he was doing. The "black" paintings he next executed incorporated recognizable images and were viewed by some critics as a regression or the onset of a decline. In later canvases, Pollock reintroduced color and texture, but increasingly depressed by the reception of his work, he made fewer and fewer paintings before his tragic death.

Pollock's art has lived on in unexpected ways. As Pepe Karmel points out, his efforts should be seen "not as modernism's conclusion but as its starting point." That's how, for more than 50 years, such open-ended work has variously inspired Helen Frankenthaler's early abstractions and their influence on color-field painting; Allan Kaprow's development of Happenings; Donald Judd's brand of Minimalism; and the eloquent abstract paintings of Brice Marden. Some 30 years ago, Clement Greenberg articulated how Pollock's art expressed "inspiration, vision, [and] intuitive decision." It was also the act of a brave and daring spirit.

Author Phyllis Tuchman last wrote for these pages in January 1998 on artist George Segal.

Pollock combined two methods of painting in *Portrait and a Dream* (1953). He used oil and brushes while the canvas was upright, then moved to the floor to pour enamel.

At Vanguard, We Feel That Every Long-Term Relationship Begins With Plain Talk.

Trust is the building block of any successful relationship. Which is why we're committed to developing an open dialogue with our investors. That means plain talk about fund performance. Plain talk about the impact of costs on mutual fund investing. And plain talk, along with patience, when answering all your investment questions.

The More You Know

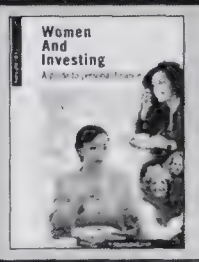
Education is also a critical part of building a long-term partnership. The way we see it, the more you know about investing, the greater the likelihood you will make informed decisions that will help you realize **financial security.**

We also believe that the more you know about investing, the more you'll understand why *Forbes* magazine, in their recent survey of mutual fund families, named 56 Vanguard funds as "Best Buys" based on low costs and risk-adjusted performance over the past 3 and 5 years.*

Combine this with our award-winning customer **service**, and it's easy to see why Vanguard has become the largest pure no-load mutual fund company in the world.

For more plain talk about investing, call us today at the number below. We believe that the more you know about investing, the more you'll want to know about **Vanguard**.

CALL TODAY FOR SOME PLAIN TALK ABOUT "WOMEN AND INVESTING."



Our free Plain Talk® brochure is designed for the growing number of women investors. Use this guide to help build an investment plan and secure your financial future.

1-800-962-5156
www.vanguard.com

THE Vanguard GROUP®

The Information Kit contains a prospectus with more complete information on advisory fees, distribution charges and other expenses. Please read it carefully before investing. *Forbes, August 24, 1998. To qualify as a *Forbes* Best Buy, a fund must be at least three years old and have assets of $50 million or more. The survey consisted of 6200 mutual funds, 221 of those funds were rated as "Best Buys". Periods 6/30/93 through 6/30/98. ©1998 Vanguard Marketing Corporation, Distributor.

There's a standard center console with handy compartments for CDs, tapes, or other personal items. With an armrest built right in, it's also a convenient place to keep your elbow.

Listen up. Durango offers a premium stereo system with Infinity® speakers and both CD and cassette.

To help passengers keep their cool, Dodge Durango offers a separate rear compartment cooling system.

Even when you're a million miles away from the civilized world, the closest convenience is right at your fingertips.

Other SUVs might se

How do you top best-in-class passenger and cargo room? With a standard roof rack, of course.*

There's no getting around it – Dodge Durango is a special vehicle. With its comforts, conveniences, and brute-force capabilities, Durango takes the sport utility to a place it's simply never been.

Durango's optional Fold-and-Tumble™ seating system is so ingenious, we're patenting it. And it's as easy to use as it is to say.

Dodge Durango has more passenger room than any other sport utility in its class. Enough room, in fact, for up to eight people when you choose the optional third row.*

e this as an obstacle.

At up to 88 cubic feet, Durango's cargo room is best-in-class. And the seats fold down nearly flat in seconds, so you can load almost anything in seconds.

V8 MAGNUM

Nobody else gives you the capability of Dodge Magnum® engines – or a choice of two V-8s. There's the 5.2 liter, 230-horsepower Magnum and a massive 5.9 liter, 245-horsepower Magnum. Either gives you more power than anybody else. There's a brawny, 175-horsepower V-6, too.*

Durango The New Dodge

800-4-A-DODGE or www.4adodge.com

*All comparisons are vs. domestic compact SUV class, excluding other Chrysler Corp. vehicles, and are based on data available at time of printing. Always use seat belts. Remember a backseat is the safest place for children. Properly secure all cargo.

The Bosporus

A DISASTER WAITING TO HAPPEN

BY RUDOLPH CHELMINSKI

PHOTOGRAPHS BY ROBERT WALLIS

WITHIN THE PAST TEN YEARS, 150 SERIOUS ACCIDENTS HAVE OCCURRED IN THE WORLD'S MOST DANGEROUS STRAIT. EACH HUGE TANKER THAT PASSES THROUGH IS A POTENTIAL BOMB. WHILE NATIONS BICKER ABOUT WHAT TO DO, MANY LIVES ARE AT RISK

IT WAS ABOUT AS PEACEFUL AND CIVILIZED A TABLEAU AS A TRAVeler could ever hope to encounter. Seated in a pleasant waterside restaurant with a salad, a basket of bread and a cold beer on the brilliant white tablecloth before me, I had the historic village of Rumelihisari at my back, a Swiss banker and a Turkish shipping executive exchanging high-level confidential information on my right, the graceful sweep of the Sultan Mehmet Bridge on my left and, directly in front, a wide-angle view of the Bosporus, glistering in the midday sun, its shoreline dappled with villas and the gorgeous old Turkish houses called *yalis*.

Shortly a big ship appeared, hugging the point of land across the way at Anadoluhisari, then ponderously turning aport to glide under the high suspension bridge. I stepped out onto the terrace to watch her pass by. This was the narrowest point of the Bosporus' entire 18-mile length, and the *Histria Prestige*, 994 feet long, 163,647 deadweight tons, registered in Valletta, Malta, and gorged to the gunwales with Caspian crude, had only a ship's length of free

Connecting the Black Sea with the Sea of Marmara and the Mediterranean, Turkey's Bosporus (inset) is frighteningly narrow. Large ships pass within hailing distance of waterfront homes.

way on either side as she headed south toward the Sea of Marmara, the Dardanelles, the Aegean and thence to her Mediterranean destination. She flew the white-and-red *H* flag, signifying "I have a pilot on board," and two little 5,000-horsepower tugs with bright-orange flanks shepherded her along, one on either side.

It was a beautiful, sunny afternoon in April. All was picturesque and well with the world. And yet, almost every facet of that idyllic moment bespoke past nightmares or potential perils of the most woeful sort. The mighty fortress of Rumelihisari squatted just south of the village behind me, an inescapable reminder of the warfare and bloodshed that have marked the history of the Bosporus from mythological times right up to the present. The military masterpiece of Mehmet II, "the Conqueror," the fortress went up in 1452, along with two others blocking the Dardanelles in the south for the express purpose of choking Constantinople to death. The strategy worked like a charm, and after Mehmet's siege guns breached the walls of the weakened city, a three-day sack followed, the luckless population was put to the sword and Christian Constantinople, the former Byzantium, jewel of the Bosporus, became Islamic Istanbul.

Nearly 2,000 years before that, Darius I, emperor of Persia, murderously intent on destroying Greek trade and civilization in what he considered his backyard, had first bridged the Bosporus with pontoons near the very spot where I stood. Even further back in time, the mythological Jason and his Argonauts had sailed the Bosporus in their quest for the Golden Fleece. Long before memory, men have been crossing back and forth over this most strategic little finger of water—the obligatory passage between the Black Sea and the Mediterranean and the symbolic dividing line between Europe and Asia—to commit mayhem upon one another.

Nor, in my idyllic moment, was the *Histria Prestige* herself entirely innocent or benevolent: pollution from shipping has today brought the erstwhile fish-rich waters of the Bosporus to death's door, and an increasingly sharp

MAP: DAVID STEVENSON

Get a new perspective on the internet. A three dimensional one.

AMD K6 2 3DNOW!

The AMD-K6-2 Processor with 3DNow! Technology

Presenting the next dimension in PC technology.

Walk around a bike. Open your doors to e-commerce. Even give your customers a 3D view of your business. It all begins with a system based on the AMD-K6®-2 Processor with 3DNow!™ Expect sharp 3D imaging, smooth video playback and incredibly fast multimedia. Even sound is more lifelike. Of course, your current Windows® applications run at lightning speed. And our new 3DNow! technology lets you see the latest 3D applications the way they were meant to be seen. The fact is, the AMD-K6-2 Processor with 3DNow! has the power to outperform Pentium® II.* More importantly, it has the power to add a new dimension to your internet experience. Get more information. Visit us at www.amd.com/bike.

AMD
www.amd.com

© 1998 Advanced Micro Devices, Inc. AMD, the AMD logo, K6, 3DNow!, and combinations thereof are trademarks of Advanced Micro Devices, Inc. Pentium is a registered trademark of the Intel Corporation. Windows is a registered trademark of Microsoft Corporation. All other products are trademarks of their respective companies. *Comparison based on 3D Winbench™ 98 benchmark scores using pre-released software (5/98).

controversy over who can control what in this, the world's most crowded waterway—easily three times busier than the Suez Canal, for instance—is pitting Turkish authorities against a host of seafaring nations, most notably Russia and Ukraine. As the oil and gas fields of Azerbaijan, Turkmenistan and Kazakhstan open up to capitalist exploitation, an additional 50 million tons a year of petroleum products will require a route to market (SMITHSONIAN, January 1998). This is the only way out by water, and the tankers that carry the stuff are monstrous oil pots navigating cheek by jowl within frighteningly narrow confines.

Everything considered, then, the 12 million or so inhabitants of Istanbul have good reason to be worried. With some 51,000 passages a year (in fact more, since vessels of less than 500 registered tons aren't officially tallied) and more than 2,000 daily cross-traffic runs by *feribot* and *dolmus*, the hectic passenger craft that incessantly ply between the various quarters and suburbs of this watery megalopolis, the Bosporus is permanently ripe for disaster. Within the past decade, 150 serious shipping mishaps have occurred, and every VLCC (Very Large Crude Carrier) or liquid gas carrier is a potential bomb.

Istanbul natives still speak in awe of November 15, 1979, when, at 6:45 in the morning, the Greek cargo ship *Evriyali* speared the Romanian tanker *Independenta* offshore of the Haydarpasa railway station. The *Independenta* went up in a tremendous explosion that shook the city and spilled 95,000 tons of oil into the water. The wreck burned for nearly two months before the fire could be extinguished, and of the *Independenta*'s 44-strong crew, only 3 survived.

"We had 30,000 claims for damaged buildings and shattered glass on that one," Ilkay Bilgisin told me when I interviewed him recently in his hillside office a stone's throw from the Bosporus. Bilgisin is chairman of Istanbul's Vitsan insurance group. "It was the worst-ever case of pollution on the Bosporus, but lesser accidents happen all the time. One foggy day not long ago, a 9,000-ton ship lost control and came straight at my own house on the edge of the water in the village of Kandilli. With her engine at full astern, she dropped anchor and stopped just two yards from our place. Navigating here is really treacherous. Nothing in the world compares to the Bosporus."

When I spoke with Ismail Soysal, across the water on the Asian side in the suburb of Uskudar, he nodded in agreement. "Of all the 20 or 30 straits in the world," he said, "the Bosporus is the narrowest—only 2,362 feet at Rumelihisari. Bad weather, fog and unpredictable currents only add to the danger."

A former ambassador who acts as president of the Turkish Straits Voluntary Watch Group, which monitors the Bosporus and the Dardanelles, Soysal naturally enough evoked the problems of the Bosporus in the idiom of diplomacy, coining the nice term "Caspian pathology" to describe the burgeoning oil production in the region. The nut of the matter is the Straits Question, an old international itch that has been treated with a variety of diplomatic salves ever since civilizations began to see the benefits of negotiation over warfare. The first in a long line of such documents was the 1833 Treaty of Hunkiar Iskelesi; the latest, still in effect, is the Montreux Convention, named for the Swiss city where it was signed in 1936.

What Montreux and the other treaties proposed to resolve was the matter of rights of passage: what vessels might operate, and when, on this unique channel that is at

A boy sells balloons (left) at a suburb where Bosporus boaters live and play. Not far away, a fashionable Turkish couple (above) enjoys a view of the strait while dining at the water's edge.

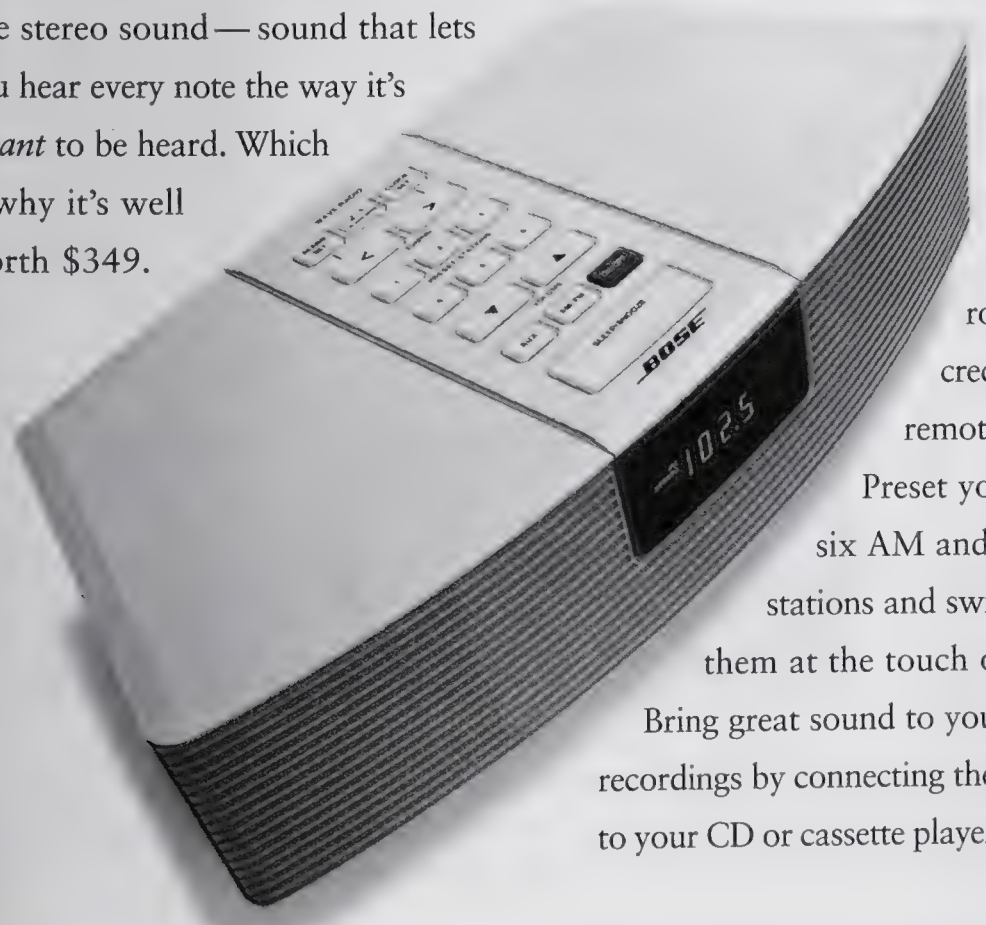
Why you should pay $349 for this radio.

Obviously, it better not be just another radio. This one isn't. Quite simply, the Bose® Wave® radio gives you sound that's richer, more natural, more lifelike than you've ever heard from a radio. Many people think it actually sounds more like a stereo system. It's no exaggeration to say you have to hear it to believe it.

Finally, Bose sound from a small radio.

The Wave radio is from Bose, one of the world's leading makers of audio equipment. A few years ago, we undertook the task of getting Bose quality sound from a small radio. To do it, we used our patented acoustic waveguide speaker technology. Just as a flute strengthens a breath of air to fill an entire concert hall, the waveguide produces room-filling sound from a small enclosure.

Touch a button and hear your favorite music come alive in rich, lifelike stereo sound — sound that lets you hear every note the way it's *meant* to be heard. Which is why it's well worth $349.



No matter what kind of music you enjoy, the Wave radio will truly increase your listening pleasure. Consider that *Popular Science* honored the Wave radio with a "Best of What's New" award. *Business Week* named it a "Best New Product of 1994." And it measures just 4⅛"H × 14"W × 8¼"D, so it's small enough to fit almost anywhere. You can listen in your bedroom, living room, kitchen, or any room. And with your choice of graphite gray or imperial white, the Wave radio not only fits any room, it fits any decor.

Great sound made easy.

In addition to great sound, we built in an array of easy-to-use features no other radio gives you. Operate the radio from across the room with the credit card-sized remote control. Preset your favorite six AM and six FM stations and switch between them at the touch of a button. Bring great sound to your favorite recordings by connecting the Wave radio to your CD or cassette player. Or connect your TV or VCR to make your favorite programs and movies come alive.

Call now and make six interest-free payments.

We don't expect you to take our word for how good the Wave radio sounds. You really have to hear it to believe it. The Wave radio is available directly from Bose. So call 1-800-681-BOSE, ext. R9724, to learn more about our in-home trial and 100% satisfaction guarantee. When you call, be sure to ask about our six-month installment payment plan.

You've had a lot of radios — small radios, portable radios. It's time you owned the best-sounding radio — the Bose Wave radio.

For free shipping, order by November 30, 1998.

Call today, 1-800-681-BOSE, ext. R9724.

For information on all our products:
www.bose.com/r9724

Our six-month installment payment plan is available on telephone orders only.

Please specify your color choice when ordering the Wave® radio:
☐ Imperial White ☐ Graphite Gray

Mr./Mrs./Ms.
Name (Please Print)

Address

City State Zip

( )
Daytime Telephone

( )
Evening Telephone

Mail to: Bose® Corporation, Dept. CDD-R9724, The Mountain, Framingham, MA 01701-9168.

BOSE
Better sound through research®

©1998 Bose Corporation. Covered by patent rights issued and/or pending. Installment payment plan and free outbound shipping offer not to be combined with any other offer. Installment payment plan available on credit card orders only. Price does not include applicable sales tax. Price and/or payment plan subject to change without notice.

the same time an international waterway and an inland waterway lying entirely within Turkish territory. The single most delicate point, of course, was the old question of a warm-water outlet for Russia's fleet, bottled up in the Black Sea with no way out except via the Bosporus. Until recent times, the nub of negotiations was warships.

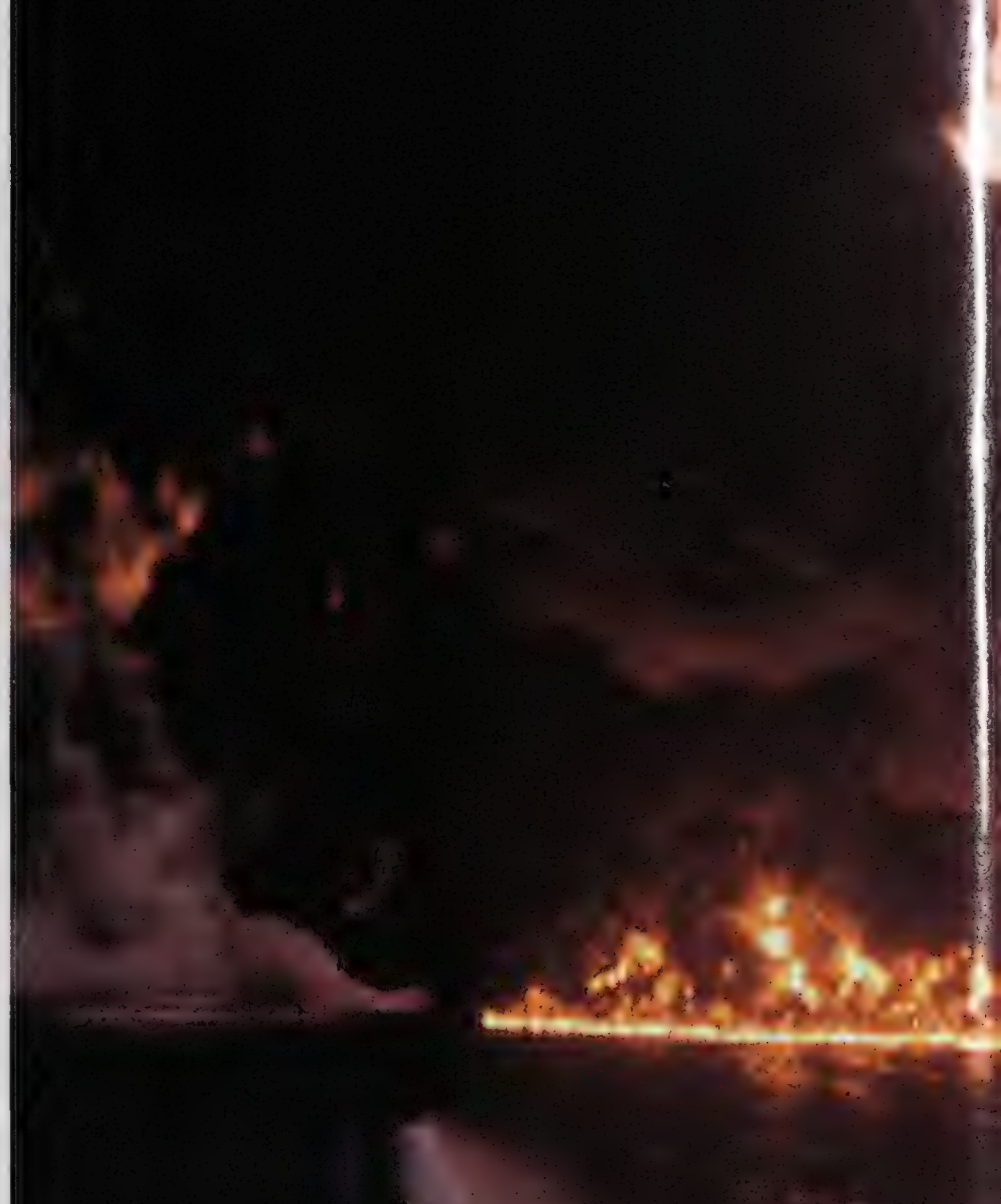
Today, everything has gone topsy-turvy. Montreux is still in force, but warships hardly count anymore. What does matter is the quantum rise in commercial shipping of the postwar period. The treaty's Article 1 starkly spells out the problem facing Turkey: "The High Contracting Parties recognise and affirm the principles of freedom of transit and navigation by sea in the straits." In other words, anyone can ship anything, anytime, day or night, in any vessel.

"It is very difficult to modify Montreux," said Soysal regretfully, "but the situation has become critical now. In 1936 only four or five ships a day—little cargoes, mostly—passed through the straits, and VLCCs and liquid gas carriers didn't exist. Now there are about 150 ships a day, and their tonnage has no common measure with 1936—160 million tons a year! A third of these ships are tankers. They are the ones that worry us. Add the 50 million more tons a year from the Caspian fields, and there is grave danger not just to the Bosporus, but to the entire city of Istanbul."

The Montreux signatories saw no need to make pilots obligatory in the straits, and the Turks bitterly regret the oversight, because the Bosporus is a singularly tricky, even vicious strip of water. To begin with, it is not a straight line, but rather a wiggly snake over which ships have to change course at least 12 times. (The Dardanelles is mostly a straight strait, with a single major change of course in the middle.) Deep and steep like a canyon through most of its length, the Bosporus offers few shallows or sandbars where errant ships might ground before smashing into the many villas and apartments that line the shore. Weather in the region is remarkably unpredictable, and it is not at all unknown for a wintry day to veer from sunshine to fog to rain to snow, with maybe some sleet thrown in.

But worst of all are the currents. Fed by the Danube, the Dnieper and the Don, the Black Sea sends a cold, brackish surface current north to south while a denser stream of warm, salty water returns underneath from the Sea of Marmara. Eddies and swirls around the sinuous coastline create devilish countercurrents, and when a strong breeze blows from the south the main current frequently reverses direction, heading back to the Black Sea, causing the countercurrents to veer from clockwise to counterclockwise—or the opposite. It is all quite baffling.

Given the multiple perils of navigating here, it would seem obvious that any prudent shipmaster would take on



A fierce fire raged (top) after a 1994 collision of two ships in the Bosporus near the Black Sea, and 29 sailors burned to death. A historic villa, or *yali*, not far from Rumelihisari, was severely battered (above) when a ship rammed it in 1996.

Last year this Russian ship ran aground in the Bosporus. Although their vessels account for about a third of the 51,000-plus annual passages, most Russian captains balk at using Turkish pilots to guide them through the strait's tricky currents.

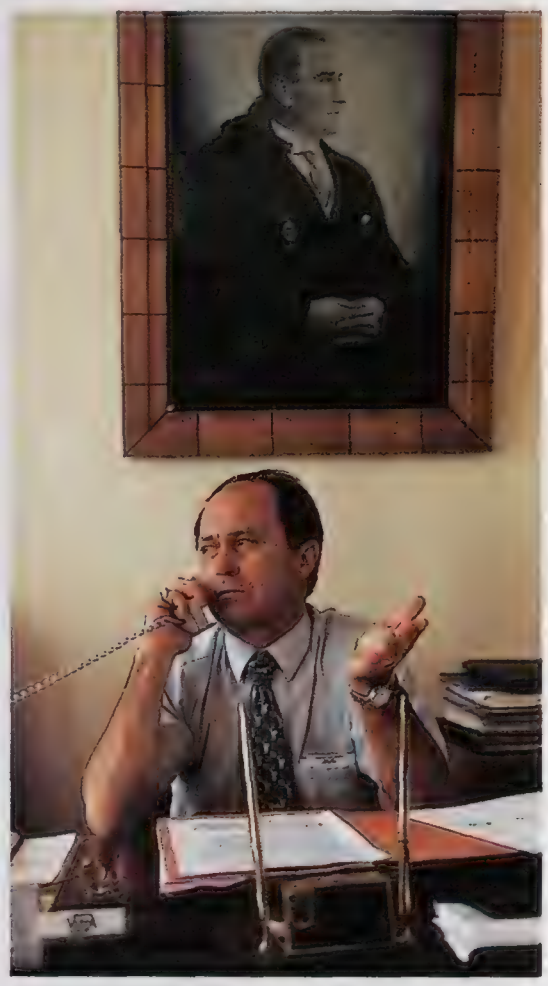
a pilot as a matter of course, but, surprisingly, only about half do so. The Russians, whose ships account for nearly a third of the passages through the Bosporus, almost unanimously refuse the services of the 42 pilots who man the strait 24 hours a day under the authority of the Turkish government. They demur partly to save money—a big tanker may cost $3,000 to $4,000 in pilotage fees—but they are also reaffirming a long-standing prickliness about freedom to act as they please in what many of them still consider to be their backyard. In the numerous Russo-Turkish punch-ups that have animated the region since the 17th century, right of passage has always been a diplomatic thistle, and Russians continue to look unkindly upon any assertion of Turkish authority over their shipping, and stick to the letter of the law as it is written in Montreux.

The big Russian oil terminal at Novorossisk, opposite the Crimea on the Black Sea's northern shore, already fills tankers with five million tons of Caspian crude a year, delivered via pipeline, and plans are afoot to increase that amount tenfold. It is a prospect that dismays the Turks—none more so than Capt. Saim Oguzulgen, pilot extraordinaire, senior traffic adviser and assistant general manager of the Turkish Maritime Organization. "A few years ago, a Russian ship crashed into a house and killed a lady sleeping in her bed," he told me in his office overlooking the ferry landing at Karakoy Harbor in downtown Istanbul. "Now insurance companies won't even insure houses on the water. I say enough—I want to live in safety. Every year shipping has been increasing here, especially since 1989, when Communism fell and new independent operators joined in from the old Soviet Union. We have now reached the saturation point, and Turkiye has the right to manage international traffic in the straits. Montreux must equalize human rights with shipping rights, because the citizens of Istanbul are not safe."

Short, stocky and as pugnacious as the oiled wrestlers of Edirne who are Turkey's national heroes, Oguzulgen is a man who speaks in exclamation marks. He deliberately pronounces his country's name "Turkiye" with the same insistence that he deliberately does not pronounce the words "Bosporus" or "Dardanelles," which he waves off as "certain mythological names" drawn from Greek folklore. "You must say 'Istanbul Bogazi' and 'Cannakkale Bogazi,'" he admonished with firm pedagogical insistence, "the Istanbul Straits and the Cannakkale Straits." He gestured theatrically up at the oversize portrait of Mustafa Kemal Ataturk (SMITHSONIAN, March 1996) on the wall behind him. "You see, my grandfather is looking down at us! These are Turkish territorial waters, not an international waterway! We have the right to organize traffic!"

In fact, the Turks have already done so. Just as the

French and the English inaugurated a system of up and down "rails" in the English Channel after the American-owned *Amoco Cadiz* went aground in 1978, dumping 220,000 tons of crude on Brittany's shores, Turkish authorities imposed a traffic separation scheme, a compulsory reporting system and a series of new navigational rules for the straits in 1994. Vessels carrying dangerous or noxious cargoes must receive permission to proceed, speed is limited to ten knots, overtaking is forbidden and vessel height is sensibly limited to 190 feet because of the two suspension bridges north of Istanbul.



Turkish government adviser Saim Oguzulgen (right) organized a flotilla (above) to promote stricter safety controls on shipping.

Although it is not spelled out in the regulations, Captain Oguzulgen made it clear that truly giant ships are not welcome. At 994 feet, the *Histria Prestige*, the ship I watched at Rumelihisari, was already pushing the limit—so much so that the strait was closed for four hours for her passage, and she was dogged every yard of the way by the two tugs. The largest vessel ever to transit was the Italian tanker *Agip Lazio*, at 255,000 deadweight tons and 1,145 feet.

"Never again!" cried the captain. "If a huge mass like that moving forward at ten knots suddenly loses its rudder, the captain can put her to full astern, but she will need well over a mile to stop—and the Istanbul Bogazi has many turns and currents. Or maybe she will lose her engine. How can she turn without an engine? No one can predict what will happen with these big vessels. If things really went bad, Istanbul could be destroyed—do you realize that?"

What Oguzulgen and his colleagues want, of course, is for pilots to be aboard all ships transiting the Bosporus. He is happy to point out that the overwhelming majority of accidents occur in pilotless ships, and that the cost of pilots in the Bosporus, calculated on the basis of ship tonnage, is about ten times cheaper than in the Panama Canal. Alas, the Russians still balk, their *nyet* irrefutably anchored in Montreux's Article 2, Paragraph 3: "Pilotage and towage remain optional."

Oguzulgen fairly gnashed his teeth in exasperation. He loves his Istanbul Bogazi with the proprietary, nationalistic passion of one who was born and raised at its edge. A native of the fishing village of Rumelikavak, he graduated at the top of his class from the Istanbul Merchant Marine Academy in 1968, then spent 14 years at sea as officer and captain before returning home to become a pilot on the waters where he swam as a boy. Over 15 years of piloting, before he was promoted to the executive offices, he watched those waters turn brown and turbid, the fish species diminish from 20 to 5 and the shipping turn from a leisurely, measured pace into something like a maritime

LIFE IS TOO

You outgrew your stroller. You outgrew your first bike. You outgrew your car. It happens. Life is too big to fit in a car. That's why we don't make cars. We believe that big lives need the big cargo space of an Isuzu Trooper. And if you outgrow 85 cubic feet of cargo space, well, good luck. Isuzu. No Cars.

ISUZU

Go farther.

BIG FOR CARS

800 726 2700 / www.gofarther.com

©1998 American Isuzu Motors Inc. "Go farther" is a trademark of American Isuzu Motors Inc.

traffic jam. From memory, he reels off a litany of the worst recent accidents:

December 1960, the Greek tanker *World Harmony* hit the Yugoslav *Peter Zoranic*. Major pollution, 20 killed.

March 1966, two Soviet vessels, the *Cransky Oktiabr* and the *Lutsk,* collide, burning the Karakoy ferry station.

October 1988, the Panamanian tanker *Blue Star* spills huge quantities of ammonia, polluting the environment.

A Turkish pilot guides a Russian skipper's steering to avoid a mishap like the one that damaged the shore near Bebek (above).

Not long after, the Iraqi *Jambur* and the Chinese *Datton Shang* collide and spill thousands of tons of crude.

November 1991, the Philippine *Madonna Lily* sinks the Lebanese livestock carrier *Rabunion 18*; 21,000 sheep drowned, their corpses causing major pollution.

But worst of all was the accident between the tanker *Nassia* and the dry cargo vessel *Ship Broker*, both Cypriot-flagged. It occurred on the memorable night of March 13, 1994, when the *Ship Broker*, heading north near Rumelikavak, unaccountably veered to port, perhaps a victim of blocked steering gear, and plowed headlong into the *Nassia*, coming south at the same time, tearing open her number one port tank. The *Ship Broker* performed two counterclockwise circles in the water before grounding on the Asian side, her screw still turning. Burning and spilling her cargo of crude, the *Nassia* drifted perilously close to Rumelikavak on the European side before Captain Oguzulgen took over as salvage master and managed to tow the flaming wreck away from his village and out into the Black Sea. Twenty-nine crew members of the two ships burned to death and all shipping was blocked for five days.

"Today I still see the faces of the *Ship Broker* crewmen who climbed the mast to get away from the fire," cried the captain, recalling that traumatic night, "and I still hear their voices calling for help."

Two days later, along with Captain Oguzulgen and pilot Ismail Yesiltas, I clambered up a rope ladder to board the *Pioneer I* in the Sea of Marmara for the run up to the mouth of the Black Sea. This elderly tanker, built in 1974, nicely represents the mysterious tax-evasive dodges so frequent in international shipping. Weighing in at 47,889 deadweight tons and registered in Valletta, Malta, the *Pioneer I* was owned by Bay Watch Shipping, whoever that was, of Lugano, Switzerland, and her all-Russian crew was under the command of Capt. Lev Alexandrovitch Kalmykov. She was formerly named the *Sea Pioneer* and before that the *Garden State*, registered in Monrovia, Liberia.

The *Pioneer I* had already long passed the point when most of the bigger VLCCs are sold for scrap and broken

ADVICE ON PLAYING THE GREAT COURSES OF SCOTLAND.

Maximize tax-deferred returns.

Use asset allocation in your portfolio.

Create an investment strategy

consistent with your tolerance for risk.

Think long term.

Oh, and avoid the bunkers.

For nearly 100 years we've embraced a single objective at Legg Mason: making money for our clients without undue risk. By adhering to this tradition of placing our clients' interests first, we can offer practical, personal recommendations. So, talk soon with one of our Financial Advisors. For advice that could take you wherever you want to go. **HOW TO INVEST**

LEGG MASON

Since 1899

1-888-423-5344 • www.leggmason.com • © Legg Mason Wood Walker, Inc. 1998 • Member NYSE, Inc. • Member SIPC

up. She was easily twice as old as the ships of many modern commercial fleets. But Captain Kalmykov was clearly a serious skipper (or maybe a worried one). White-haired, skinny and intense, he stood tight-lipped between the pilot and the helmsman for the entire two hours of our route north, crossing his arms on his chest, gazing intently forward and mentally gauging every turn his ship took.

Right-left, right-left: Yesiltas leaned against the *Pioneer I*'s forward window, calling out the course changes in English, and the helmsman repeated each command before setting the new degrees of rudder angle. Rumbling, whining and throbbing, the big ship motored smoothly under the first suspension bridge, enjoying unusually fine weather and placid waters that day. Even so, ghosts of past disasters and warnings of future mishaps lay everywhere around us. From the starboard bridge wing high above us, I could have lobbed an orange down against the sitting room windows of the plush villas at the point of land at Kandilli, where we cut the corner breathtakingly close before the bow, ever so slowly, came around to port again and set a new course for Anadoluhisari and Rumelihisari. Just after the Sultan Mehmet Bridge, Captain Oguzulgen gestured urgently to the left to point out the eviscerated remains of the waterside house where Kalmykov's Russian colleague had paid a surprise visit to a luckless lady in her bed a few years earlier. Moments later we passed an apparently placid bay where, Captain Oguzulgen explained, unsuspecting boats could be swung right into the shore, the bay's dead-calm surface waters signaling the critical point where the main current mixed with the countercurrent. Nor were currents the only danger. The captain did not resist the pleasure of showing me the high-tension powerlines that had been the downfall of an overconfident German captain who had years of experience with the Bosporus. Navigating at night, he had mistaken the radar echo of the power lines' magnetic field for an oncoming boat and steered his freighter straight onto the shore road, destroying the plates along the full length of its starboard side.

So many dangers, so many traps, so many things to worry about. Now we approached Rumelikavak, the place where the captain was born and where the terrible *Nassia-Ship Broker* accident had happened. A strange detail had always stuck in his head from that time. When he finally had managed to put a towline aboard the *Nassia,* the heat was still so intense that the water from the fireboats' hoses was boiling under his boots.

Captain Oguzulgen's salvage operation of the *Nassia*'s drifting, burning hulk had been longer and more perilous than it ought to have been, and Turkish authorities took instruction from the incident to order some fast new fireboats. Further, a modern $40 million radar system to watch over traffic is now in the works. But observing the flow of vessels and putting out their fires is not nearly as good as active security—and for this, the Turks are sure, nothing beats the use of pilots.

"It's a very complicated matter," said Roger Kohn, a spokesman for the United Nations' International Maritime Organization (IMO), based in London. "The Turks have come to us to ask for approval of new rules for safety in navigation, including mandatory pilots. There's a lot of support—including from the oil companies—for action on this, because it is clear that the situation in the Bosporus is going to get worse unless something is done. But once you begin restricting free access you go beyond safety and get into the realm of politics."

While diplomatically avoiding the pointed finger, Kohn clearly meant the Russians when he said "politics." The giant from the north, responsible for a third of all the tonnage that goes through the Bosporus, and most of that in the form of pilotless oil tankers, clings stubbornly to Montreux's laissez-faire text and, on paper, anyway, there is precious little the Turks can do about it. The matter is now under consideration by an IMO subcommittee, and sooner or later some new recommendations will come forth. There is always the hope that a series of proposed pipelines from the Caspian fields might alleviate the situation, but only somewhat. Captain Oguzulgen believes that there are more important remedies: more modern ships, special training to prepare officers for the Bosporus' many hazards, and a reduction in the volume of dangerous materials transported.

And yet, how simple and crystalline it seemed on that beautiful, balmy spring morning on the Bosporus when Captain Oguzulgen and I neared our disembarkation point aboard the *Pioneer I*. Up on the tanker's bridge, part of Oguzulgen remained in the groove of professional fretting and part was tempted to simply enjoy this lovely Saturday morning. The inner clash erupted into a curious monologue that was half lament and half an expression of pure pleasure. "You can never say something won't happen—you can always have a breakdown. Every ten minutes there is a risk to the citizens of Istanbul. These vessels are passing through the Istanbul Bogazi—but they are also passing through my heart! Look around you, look around—how kind of a beauty! No one can destroy this for making money. They have not the right!"

Viewed from a minaret atop the famous Blue Mosque in Istanbul, ships anchored in the Sea of Marmara look like toys.

Rudolph Chelminski, who lives in France, wrote about chess in January. Photographer Robert Wallis is based in London.

AMERICA'S LOVE AFFAIR WITH FITNESS BEGAN A LONG TIME AGO IN SOUTHERN CALIFORNIA (WHERE ELSE?) AT A PLACE CALLED...

MUSCLE BEACH

BY KEN CHOWDER

EACH

PHOTOGRAPHS BY GERRY GROPP

THERE ARE TWO MUSCLE Beaches—separate places, though they're separated more by time than space. One still exists; it's easy to find. Just go down to the boardwalk in Venice, a seaside community on the edge of Los Angeles. You can't miss it, for Muscle Beach Venice is a continuous circus without walls—bright, loud and bizarre. Everybody, it seems, has an act. The fire-eating Butterfly Man on Rollerblades careens down the boardwalk, followed by the Pyramid-Head Woman—her youthful appearance due, her sign says, to the preservative power of the pyramid she wears on her head. Another act-in-residence is the Chain-Saw Juggler; he fires off politically incorrect jokes, then screeches away in his Porsche when his act is over. The grandmother called Skateboard Mama poses for an ad for athletic wear. Unicyclists, cut-rate psychics, snake charmers, men in string bikinis with purple hair—come one, come all.

The focus of Muscle Beach Venice is the "Pit." This open-air weightlifting area, after years of decline, has been revamped and refurbished, with the concrete roof of the equipment room shaped, of course, like a barbell. On certain days, the Pit is filled with nearly naked men and women, competing in bodybuilding. Spectators begin queuing up early in the morning for spaces on the boardwalk beside the Pit. When the body-jousting finally begins, the onlookers stare, gasp and go giddy. The oohs and aahs ripple through the crowd as yet another giant adjusts a pink G-string, then poses like a god.

Strength is not usually the end in itself. It's just the means. The end is How You Look. Skin is the ultimate weapon here: who shows the most, who bulges most. It's L.A., after all, the "show" place of America, where bigger is better, and more is more. The higher the profile, the happier you are. You present a perfect surface, because image, as advertisements repeatedly tell us, is everything.

Maybe, after a noisy half hour, you've had enough. So you ask around about the other Muscle Beach. You find out it's a couple of miles up the coast in Santa Monica, near the pier. What you see there is a stretch of sand, marked by a single plaque on a pole. It reads: "The Original Location of Muscle Beach. The Birthplace of the Physical Fitness Boom of the Twentieth Century." The original Muscle Beach is essentially a ghost, a story about the past that a group of cheerful old fellows—and a few women—will tell you as you sit on a bench beside them in the baking Southern California sun.

The story has all the elements of a modern fairy tale, "The Ugly Ducklings on the Beach," maybe. It goes something like this: Once upon a

time, in a kingdom by the sea, a company of people came together. They were different from others; even their bodies were different. This made them outcasts. People in power demolished their meeting place to get rid of them. But they kept doing what they loved, and in time their gospel spread over the whole kingdom. The End.

For nearly a quarter of a century now, fitness has been an important part of the American lifestyle. Our society does, it is true, have a high percentage of obesity, but Americans buy more health club memberships than any other people. For millions here, health is the highest priority.

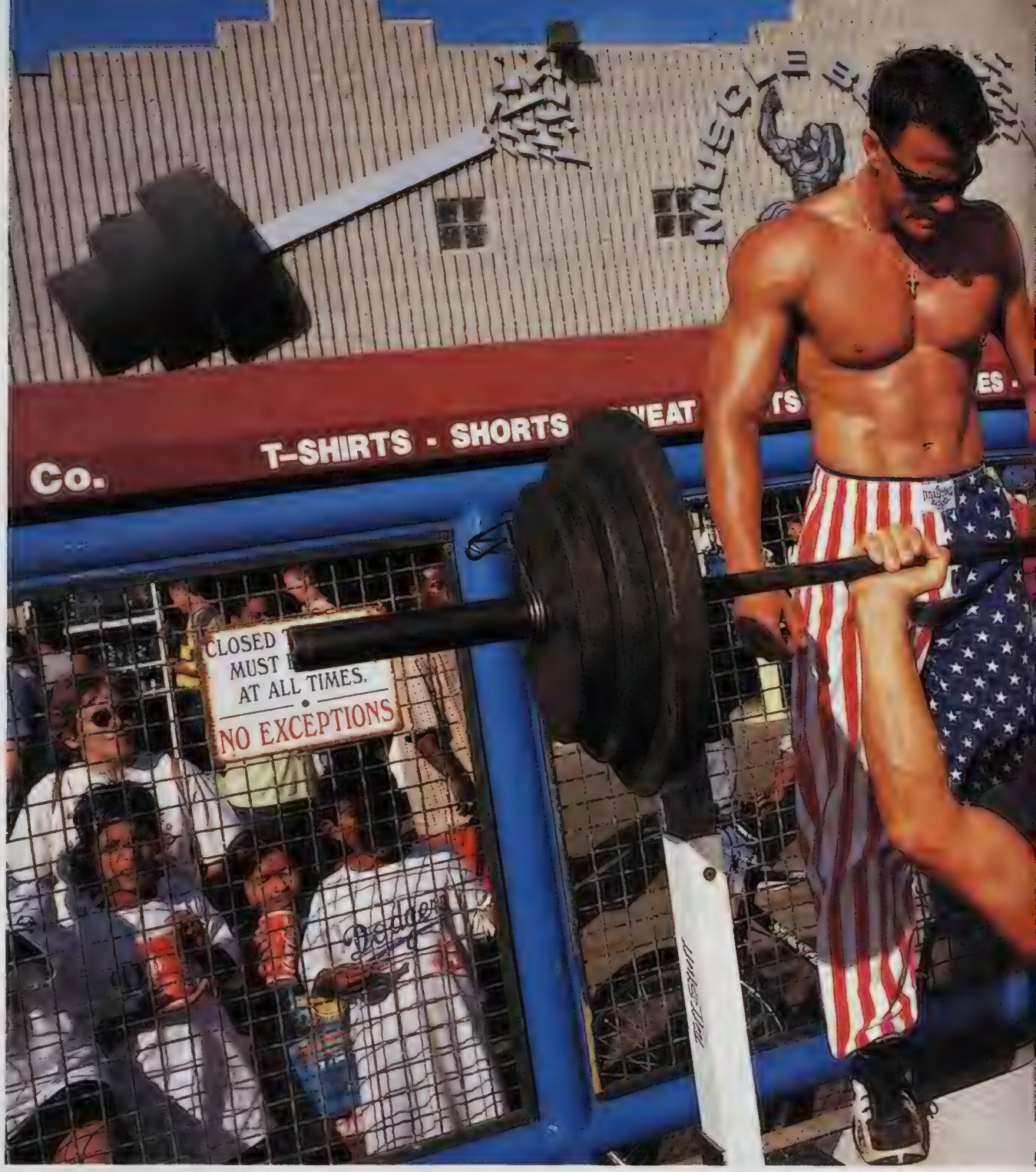
Today it's all about bodybuilding, but in 1946, at the original Muscle Beach (left), the focus was on strength and acrobatics.

Some people run, some walk, some swim, some pump iron, some do calisthenics or aerobics, and many more are just about to, any day now, tomorrow for sure . . . or maybe the day after tomorrow.

We have a national obsession with our bodies. Perhaps we've always had such an obsession; perhaps this is what motivated Puritans and then Victorians to swathe themselves in shapeless heaps and even hoops of clothing, meant to hide the shame of bodily (and therefore sexual) existence. But the open adoration of the body, the flip side of the same coin, is a much more recent part of our cultural landscape, a strictly 20th-century phenomenon. It may be presumptuous to say that the cult of the body began at any specific time or place, but let's say it anyway: Muscle Beach is where it all began.

That beginning was long ago. The name of the beach, some say, came not from biceps but from shellfish: from the mussels stuck on the pilings at the Santa Monica Pier. The human muscles arrived later, but exactly when is uncertain. Some sources have recalled a gymnastics horse planted in the sand there as early as 1924; more usually, a Santa Monica playground instructor named Kate Giroux gets credit. She wanted her charges to enjoy a little sunshine, a little exercise. At first she brought the kids out to the beach for picnics. But there was nothing much for them to do. So in 1934 she arranged to have parallel bars, rings and a small tumbling platform installed. Strange to say, the original Muscle Beach also had tables for Ping-Pong, chess and checkers. There were even "handiwork classes."

Weights are heavy at Muscle Beach, but performers keep the atmosphere light.



Ready to lend assistance if needed, one bodybuilder stands by while another does his "reps" in the lifting area, referred to around Venice as the "Pit."

What it didn't have was bodybuilders in the same sense as we have them now. "It wasn't about the muscles per se," says Russ Saunders, one of the members of the Muscle Beach Alumni Association, a genial group that remembers the old days. "It was a playground. That's all we called it. The playground at the beach."

The focus of attention at the playground was acrobats. In those days, acrobatic feats were a popular form of entertainment featured in vaudeville and nightclubs alike. Many will remember, from early TV, performers bouncing across the stage of *The Ed Sullivan Show*. Muscle Beach quickly became a mecca for acrobats. Example: a little girl named Paula Unger (now Paula Boelsems), 8 years old, had just moved out from Denver, and one day she went walking down the beach with her sister. "I saw people just flying off rings and bars into the air," she remembers. "Right away it was, 'Oh, Mister, can you teach me to do that?'" Even in 1938, the *Los Angeles Times* reported, "it seems that

P.124 CENTER: CARL R. NIELSON

everyone on the beach can stand on his hands." A few years later, *U.S. Camera* magazine saw Muscle Beach as "a wide stretch of sand between hot dog stands and ocean, [with] dozens of big muscular people throwing little muscular people high into the air, shapely girls doing flip-flops on a long platform, agile teen-age boys twisting through space."

Gymnastics today, as popularized by the Olympics, is an individual sport, but the emphasis at Muscle Beach was on cooperation and teamwork: hand-balancing, human pyramids and adagio (the throwing and catching of bodies). "It was something we could all do together—there was no sense of competition," says Les Stockton, whose partner was often his wife, the spectacularly misnamed

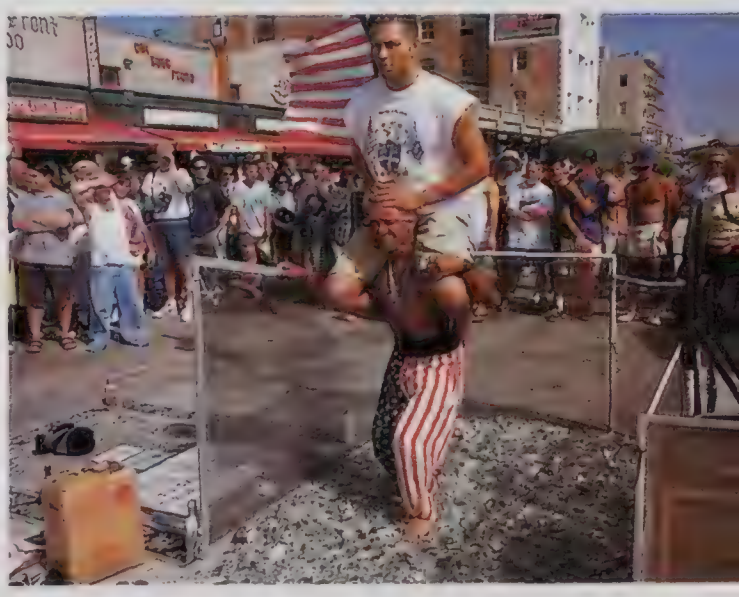
Muscle Beach Venice is a continuous circus without walls—bright, loud and bizarre. Everybody has an act.

Abbye "Pudgy" Stockton. "We taught literally thousands of kids," Paula Boelsems recalls. "Knowledge wasn't a secret. Everybody was willing and eager to share." Harold Zinkin, who was both a gymnast and a weightlifter, remembers the incredible connection among the athletes. "It was like an acrobatic jam session," he says. Zinkin was a bottom man on the human pyramids, a position nicely named the "understander." "You could feel the emotions in the guy above you just by the way his toes moved on you. The understander could actually sense his thoughts."

To be a good gymnast, of course, it helps to be strong. The acrobats lifted weights right on the beach. Soon they were joined by weightlifters, and still later, by a small group of men who wanted to do something that in those days was considered very strange: they were interested in building up their bodies. Their goal was to look and feel good, period.

Today, when workout machines are such big business that solid hours of TV commercials are devoted to them, it's hard to comprehend how outlandish the idea of bodybuilding, or even training, was in pre-World War II America. "Lifting weights?" Russ Saunders says. "If you jogged in the sand back then, people thought you were a nut." "People thought weight training would hurt your heart," Les Stockton adds. "Weights were taboo, even for men." Muscles carried a certain stigma. "It was embarrassing to say you were a bodybuilder," is how Harold Zinkin recalls it. Even in the 1950s, the idea smacked of strangeness: "Mention Muscle Beach . . . ," the *Saturday Evening Post* commented in 1957, "and you are liable to draw only sniggers or snorts."

In retrospect, a day at the original Muscle Beach sounds like a visit to a peaceable kingdom—the past, in an innocent place called America just before World War II. You could take the electric-powered trolley out to the beach from the booming young city of Los Angeles. The snack shops, like Eddie's and George's, Khoury's and St. Leonard's, displayed hand-painted signs advertising ice-cream cones, Royal Crown soda, and hamburgers for 10 cents. In the distance, the American flag waved over the equipment shed. On Sundays, the community of athletes "came right from



Tourists watch a barefoot strongman carry a volunteer across broken glass.

church," according to one account. The gymnasts and bodybuilders on the beach would take breaks—for tall glasses of milk or carrot juice.

The private workouts gradually turned into a good-natured, informal show. "We didn't perform for other people," Paula Boelsems says. "We performed for ourselves. But people came along, stopped, and they watched." Eventually the city recreation department made the shows

standard summer fare, with circus acts, tumblers, hand-balancers, trampoline specialists, ring artists and, to be sure, bodybuilders. Huge crowds, thousands of people, gathered around in the hot sun to watch. The gymnasts built human towers (sometimes with a blind acrobat named Ed Motter at the top); muscle builders bench-pressed bathing beauties instead of barbells. Even the crowds, which could include such bombshells as Jane Russell and Jayne Mansfield, were worth watching. Those were the golden days at Muscle Beach.

The show had a changing cast of characters, but many of them were memorable. They were unassuming people, an unusual group who didn't think of themselves as exceptional. Paula Boelsems, for example, owned an elephant. "I got it for a very good price," the acrobat remembers now. "I taught it how to water-ski right off the Santa Monica Pier." How do you go about teaching an elephant to water-ski? "I started her off in a small pool, of course," Boelsems says, as if it were the most natural thing in the world. "That's how you get them used to being on skis."

Bodybuilder George Eiferman was from Philadelphia. "I'm from Philadelphia, but I don't sing," Eiferman once told a reporter. "Everybody else from Philadelphia sings." His parents were from Hungary and Russia, but their son was an American original. He attended the Philadelphia Music Academy, but "I was the worst trumpet player in the band. There were eight chairs and I played ninth chair." Eiferman was better at weightlifting. He entered the Mr. Philadelphia contest, and won. So Mr. Philadelphia

A half-century or so has passed since Russ Saunders got ready to catch the airborne Paula Unger, who had just been tossed over a human wall by two burly pitchers. Today Paula Unger Boelsems (above) remains acrobatic and up in the air.

BOTTOM BILLY HEARN

MISSION: To design a new generation launch vehicle that will dramatically reduce the cost and complexity of going into orbit. This will enable private companies to launch countless space-based businesses, creating a new universe of opportunities in the century ahead - just as private enterprise helped the aviation industry take off during *this* century.

Possibly the most far-fetched idea since the airplane.

LOCKHEED MARTIN

SUCCESS: Lockheed Martin and partners have created an innovative yet practical design called VentureStar,™ a reusable, single-stage-to-orbit vehicle. But first, we're building and will soon fly a 1/2-scale demonstrator - the X-33 - to validate these advanced technologies. It's one way we, as a global technology leader, are helping to launch the future.

www.venturestar.com

AlliedSignal

BFGoodrich Aerospace

BOEING Rocketdyne Division

Sverdrup

NASA

went on to the national championships, where he finished fifth, losing to an incredible specimen named Steve Reeves. Reeves invited Eiferman out to California to train with him, and Mr. Philadelphia soon became Mr. America of 1948, and even Mr. Universe. At Muscle Beach, Mr. Philadelphia/America/Universe, more often known as George, combined his two arts: he played the trumpet with one hand while lifting weights with the other. Plainly, George Eiferman didn't take himself too seriously. When the Muscle Beach show went on the road, touring the Hawaiian Islands, Eiferman amused the guests at a luau by dancing backward—until he backed straight into a tub of beer and came to rest with his feet flailing in the air, and his head soaking in the ice cubes. But crony Les Stockton reports that Eiferman had handed him his wallet for safekeeping even before embarking onto the dance floor. "The pratfall was strictly intentional," Stockton says. "George was a true clown."

Glenn Sundby, famous for going down all 898 stairs of the Washington Monument on his hands, was "a sick runt as a kid."

Now the archivist of the original Muscle Beach, Sundby is in great shape and still going strong.

Eiferman was a bodybuilder, a massive man for his day. Russ Saunders was a different type—built more like a flanker than a fullback. He was an incredible acrobat who could do a flip over a man sitting on a bench and, at the end of the flip, be wearing the man's hat. Like many of the Muscle Beach regulars, Russ Saunders made his living as a Hollywood stuntman. He estimates that he's appeared in a thousand movies. He doubled for Gene Kelly, Burt Lancaster, Kirk Douglas, Tyrone Power, Humphrey Bogart. That fight scene in *Shane*? It wasn't Alan Ladd: it was Russ Saunders. Like most early stuntmen, he'd try just about anything. "If the director said, 'Do it,' you just did it. He was God," Saunders says. Russ did turn down one stunt, however. "They wanted me to ride a motorcycle right down a 75-foot cliff. I said, 'Hey, I want to talk to the writer about this.'"

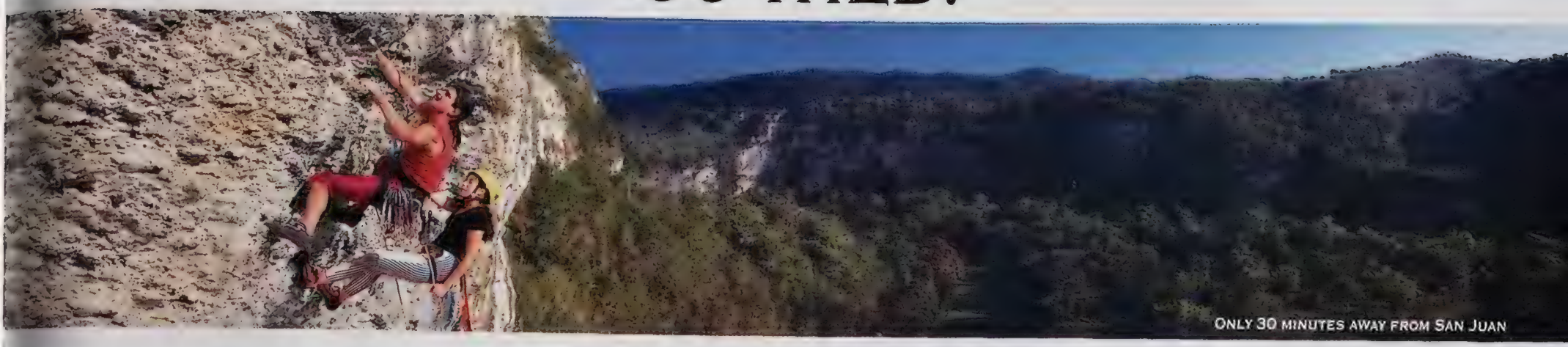
But his most artistic achievement wasn't a film at all. One day in 1950, studio head Jack Warner summoned Saunders to Warner Bros. "To be interviewed in Jack Warner's office, I thought, this must be special." Warner's secretary just handed him a pair of tights. "I paraded around in front of this man with a waxed mustache and a glass cane." The mustachioed man was Salvador Dalí. After auditioning 500 models, he'd found a man to stand in for Jesus Christ. For three weeks, Saunders hung from a cross while Dalí drew and redrew his image. The result was one of Dalí's most celebrated works, *Christ of Saint John of the Cross*, in which Jesus rises on his cross into a dark Heaven.

The original Muscle Beach, in contrast, seems a sunny universe, a place of cheerful optimism. The body was electric, and energy ruled. You could look out into the Pacific and watch a young, ambitious gymnast named Jack LaLanne swimming along—pulling a small armada of boats by a rope looped to a belt around his waist. That trick exemplified Jack LaLanne's gritty determination. He lived in the San Francisco Bay area, but every weekend he would drive all night to practice gymnastic feats on Muscle Beach. That spectacular energy brought results. His exercise show in the early '50s, where he perpetually plugged the benefits of training, was the first on television. He also ran one of the first modern exercise gyms, which begot a chain of gyms. Jack LaLanne has been called the "father of physical fitness," which may be stretching the point a little, but he was one of the first persons to become a star simply through the practice and advocacy of fitness. "Jack was always happier with success," is how Les Stockton puts it. "He doesn't like to be beaten in anything. He'd almost kill himself trying to be first."

Jack LaLanne was not the only Muscle Beach man to achieve celebrity. Steve Reeves began as a local hero: with a 51-inch chest and a 29-inch waist, he inspired stunned stares everywhere he went. "God gave him a one-in-a-trillion body," George Eiferman recalled some years ago. "He'd just walk down the beach, and throngs would follow without knowing who he was." By the late 1950s, people knew who Steve Reeves was. He starred as Hercules and other godlike heroes in toga and sandals in a number of beefcake movies, a bodily American legend.

Even at its most glitzy, the original

GO WILD!



ONLY 30 MINUTES AWAY FROM SAN JUAN

CIALES MOUNTAINS

ONE OF MANY DIVING LOCATIONS IN THE WEST OF THE ISLAND

PARGUERA REEF

THE 3RD LARGEST UNDERGROUND CAVE SYSTEM IN THE WORLD

CAMUY CAVES

RICKY MARTIN

A BEAUTIFUL LAKE SURROUNDED BY MOUNTAINS

GUAJATACA LAKE

"Come discover a world of outdoor adventures in Puerto Rico. You will find something different to do every day... and every night!"

Does it sound exciting? Just ask your **Travel Consultant** about all the wonderful vacation experiences in Puerto Rico.

For groups and conventions, call 1-800-875-4765

PUERTO RICO USA

ONLY PUERTO RICO PUTS IT ALL WITHIN YOUR REACH

Call today 1-800-866-7827

Muscle Beach scene could have a certain sweetness to it. In the mid '50s, Mae West became intrigued by the men of Muscle Beach. She went to the beach and handpicked several muscle builders for a show that traveled with her to Las Vegas and broke nightclub records all over America. Mae West was 62 years old, but one of her muscle men, Chuck Krauser, fell in love with her. "It wasn't the Hollywood type of love," George Eiferman relates. "He was genuinely in love. Chuck stayed with Mae until the day she died. He took care of her when she was an invalid. They were together for 30 years."

West Los Angeles; then, in 1948, Zinkin invented Universal training equipment, the first of the modern workout systems. Joe Gold, too, was a Santa Monica regular, and later started Gold's Gym at Muscle Beach Venice. Originally Gold's Gym was for serious bodybuilders and weightlifters, but the franchise zoomed around the world, its T-shirts familiar everywhere—something like the Hard Rock Cafe of the bodybuilding world. Gyms and training equipment, in fact, seemed to radiate from Santa Monica, bringing the Muscle Beach message to the world. But what, exactly, was that message?

Fitness entrepreneur Jack LaLanne flexes in front of the sign that commemorates the first Muscle Beach. LaLanne was one of the regulars in the early days.

Like Jack LaLanne, another Muscle Beach regular named Vic Tanny opened a gym, then a string of health clubs all over America. His places were spacious, carpeted and clean, giving an illusion of sweatless good health. Harold Zinkin and his partner, Bruce Conner, started a gym in

The message was largely that there was a connection between body and mind—that the body, in fact, could rule the mind. Muscle Beach, as Jack LaLanne once said, "was such a perfect place to show kids that anything in life is possible." "It gave me both confidence and humility," Harold

Muscle Beach, as Jack LaLanne once said, "was such a perfect place to show kids that anything in life is possible."

Zinkin says. Glenn Sundby, now the archivist of the original Muscle Beach, was a great athlete, immortalized in Ripley's *Believe It or Not!* for going down all 898 stairs of the Washington Monument on his hands. But it was not always so. "I was a sick runt with asthma as a kid," Sundby says. "Muscle Beach did so much for me." And that message was not just for boys who wanted to avoid having sand kicked in their faces, as in the old Charles Atlas advertisements. It was for females, too. "I had feelings of inferiority," Pudgy Stockton says, "but when I learned how to do my first handstand, I felt so good."

Muscle Beach might have been a macho paradise, but Pudgy and at least a few other women fit right in. Russ Saunders posed with his smiling mom. She was 67 years old at the time. Russ was perched on her shoulders—and a youngster was perched on his shoulders. Paula Boelsems felt like the beach was a second home, and the muscle men protected her; she's still there, tumbling away. But the true queen of Muscle Beach, most old-timers would agree, was Pudgy Stockton.

Pudgy met Les Stockton in high school; they're still together today, still living in Santa Monica, still physically active in their 80s. Pudgy is demure and soft-spoken, and lets her entertaining husband do most of the talking. Pudgy might play at being the dutiful wife, but she was a pioneer: an acrobat who was also the first great woman weightlifter.

When Pudgy started her career, she

IT'S NOT WHAT YOU GET AWAY FROM.
IT'S WHAT YOU GET AWAY TO.
JACK DANIEL'S SINGLE BARREL WHISKEY
A SINGULAR EXPERIENCE
JACK DANIEL'S
SINGLE BARREL
Tennessee Whiskey
Your friends at Jack Daniel's remind you to drink responsibly.
Tennessee Whiskey • 47% Alcohol by volume (94 proof) • Distilled and bottled by Jack Daniel Distillery, Lem Motlow, Proprietor, Route 1, Lynchburg (Pop. 361), Tennessee 37352 • Placed in the National Register of Historic Places.

had no such grand goals. She had a job at the local phone company, where she sat all day long, and she just wanted to lose a little weight. Les, who was on the UCLA gymnastics team, suggested she lift a few barbells. Pudgy lifted quite a few. In the end, she organized the first weightlifting contest for women in the country, and she owned and ran the first women's gym in America.

Even at her own gym, "it was best not to emphasize muscles," Pudgy remembers. "Women were only interested in reducing. There was a prejudice about women and muscles. You would hear things like, 'Oh, she's got a back like a man.' I just ignored that kind of stuff."

Pudgy Stockton definitely did not look like a man. "She was a damn

In the 1950s, the Muscle Beach regulars were too far ahead of their time to be mainstream material.

desirable little pumpkin," her husband says, and the photographs back him up: she graced the covers of no fewer than 42 magazines. But one newspaper, reflecting the anxieties of the age, found it necessary to say that Pudgy, in street clothes, was dainty and feminine; both she and her acrobat friend Relna Brewer, the paper added, "are good housekeepers and can cook a good meal, handle a duster, and even darn socks."

Today, the original Muscle Beach ethic seems like homespun wisdom: if you feel bad, try to look good, and you'll feel better. A body's accomplishments can give peace of mind. But in the 1950s, not everyone liked that message. The Muscle Beach regulars were too far ahead of their time to be mainstream material. "We were considered Bohemians," George Eiferman says, "health Bohemians." "We took a lot of criticism," Paula Boelsems recalls. "People said, 'Oh, they're kooks.'" Bill Howard was another Muscle Beach regular. He, too, remembers the attitude in the 1950s. "We didn't have many friends, except those we met on Muscle Beach," he recently recalled. "If we walked five blocks off the beach, people would look at us like we were freaks."

Even so, the crowds were getting enormous by mid-decade. The city of Santa Monica was proportionately appalled: it was unseemly to have so many tourists flocking to watch the vulgar show of grotesque bodies. Then, in 1958, five Muscle Beach athletes (one of them an Olympic champion) were accused of having sex with two underage girls. The Santa Monica *Evening Outlook* blared the headline: "Officials Stirred As Sex Orgy Bared." And a city councilwoman named Alva Drobnick complained, "Muscle Beach isn't a healthy thing. It attracts a bad element to the area. . . . The Muscle Beach crowd has been bragging about how much publicity they have brought the city. I wonder how they are enjoying the publicity now."

Eventually the men were exonerated. The Muscle Beach workout area, however, was demolished anyway. The platforms and gym equipment were torn out.

According to Les Stockton, "an area underneath the pier had become a meeting place for sexual activity. The

In their 80s now, Les and Pudgy Stockton are still active and still together.

Life is a ribbon.
Are you tying yours in knots or bows?
New Tension Tamer™ Supplement with Kava Kava
Tension Tamer herbal supplements are a unique blend of kava kava, St. John's Wort, and other natural restorative herbs that help ease anxiety and relax your body. You can also enjoy Tension Tamer® in tea form. Part of our complete line of herbal supplements and teas, crafted with 30 years of dedication to herbal health. Visit us at www.celestialseasonings.com.

Teas and Supplements
CELESTIAL SEASONINGS®
What you do for you.™

city just didn't want people there." But Paula Boelsems disagrees. "It was mostly about parking," she says. "They wanted to put in more parking lots." One official version, disclosed in a pamphlet about Venice recently published by the city of Los Angeles, offers a third explanation. The city claims that the original Muscle Beach "was closed in 1959 due to difficulties in the maintenance and supervision of the facility."

But Muscle Beach rose again. The bodybuilding regulars migrated two miles down to Venice. Only a few years later, the Muscle Beach message became a kind of national gospel. Arnold Schwarzenegger arrived in California from Austria in 1968, and a few years later the film *Pumping Iron* made him a cult hero. By the late 1970s, health and fitness was a national mania. Joggers bounded around city and suburb; Perrier usurped the place of the dry martini; the American public either slimmed down or bulked up, or both.

But the art of bodybuilding was changing, too. The bodies themselves began to look more and more like caricatures, people dwarfed by their own muscles. To achieve that dubious distinction, many bodybuilders frequently resorted to the use of drugs. Steroids became, for some, a prerequisite to winning contests. One bodybuilder reportedly took at least 20 different steroids before one such event. And steroids, of course, aren't good for you. A great irony of the bodybuilding scene today is that many of the giants who are supposed to embody health are not all that healthy. Another former bodybuilder says: "Competitive bodybuilding is the least healthy of all sports. On contest days, some bodybuilders are very close to death."

Steve Reeves, who was once Mr. America, has said that he is proud that he "never used any of these chemicals, like steroids, that weightlifters use today. It's too bad how they bloat themselves up. When your arms begin to look bigger than your head, something is wrong."

Stuntman Russ Saunders shows "how to pick up girls" on Muscle Beach, circa 1948. Pudgy Stockton is the second woman from the right.

Santa Monica has now decided something was wrong when the old Muscle Beach was obliterated. Even though some exercise equipment has been in use at the beach for years, the city has recently launched plans for a rebirth of the original site, complete with a workout area, rings, parallel bars and, yes, chess and checkers, just as before. What may be harder to duplicate are the feelings and the camaraderie. "When I first started going there," Harold Zinkin says, "I felt like Alice must have felt walking around in Wonderland." In those days, the motives of the people who worked out on Muscle Beach were good health, togetherness and happiness. A lot of individuals are in bodybuilding today for the money and the fame; it's a hustle and the pace is much faster than it used to be. The old-timers insist it's not as much fun. "It was a day to look forward to," says Glenn Sundby. What was? "Every day," the aging acrobat says. "It was always a day to look forward to."

Ken Chowder is working on a documentary film about Muscle Beach. Photographer Gerry Gropp is based in San Francisco.

A 90 year-old was a lot older fifty years ago.

Advances in medicine and healthcare are helping older people live fuller, more active lives. Advanced thinking of another kind is helping affluent seniors preserve something almost as important as their health, their wealth. Clients of Manulife Financial were the first to benefit from the use of joint-life insurance for estate preservation. And our expertise on the subject continues to be unmatched. By changing with a changing world, we're providing better choices for life insurance, annuities, and 401(k) plans. And that's what makes us different. Ask your financial advisor. Call 1-888-MANULIFE. Or visit www.manulife.com. Discover the reasons why we're smart company for your money.℠

Manulife Financial

Manulife Financial and the block design are registered service marks of The Manufacturers Life Insurance Company and are used by it and its subsidiaries. Product availability and product features vary by state. In New York, products are issued by The Manufacturers Life Insurance Company of New York, based in Rye, NY. ML1082897645 ©1998

MATANUSKA'S CROP VALUED AT
-E DAY OFFICIALLY
London, May 7. (AP)–The war against Germa
der of the once mighty Wehrmacht. The surre
ower's headquarters at Reims, France, by th
The British government announced
broadcast at 9 a. m. Eastern W
Folk Asked
Celebrate
ober M
THE NEW YORK
NEW YORK, TUESDAY, APRIL 16, 1912 - TWENTY-EIGHT
TITANIC SINKS W
PERSONS ON BOAR
OF HER PASSENG
DRAWING OF THE TITANIC, ARRANGED TO SHOW THE CHARACTER OF THE DISASTER
No. 6— E
PAID CIRCULATION SIX MONTHS ENDED
MORNING 183,944
EVENING 213,127
402,371 || SUNDAY
Kennedy Mu
Johnson Swo
Congressmen
PRESIDENT DESCRIBED AS 'MARTYR,' HIS FATE COMPARED TO LINCOLN'S
Warren Blames 'Bigots'; Britain Laments Kennedy's Death As If He Were One Of Its Own Leaders
Independence, Mo., Nov. 22 (AP) — Former President Harry Truman issued this statement to-
the assassination of President Kennedy:
shocked beyond words at the tragedy
country and to President
great personal loss
the people
The Washington Post
FRIDAY, AUGUST 9, 1974
Phone (202) 223-6000
Nixon Resigns
sumes Presidency Today
ournal
MORNING FINA
MOON
Leap for Mank
Amer
to Walk
Lun
ne Gi

FOR THE COLLECTOR OF HISTORY IN PRINT

OLD NEWS IS GOOD NEWS

BY EUGENE L. MEYER

AT 11 P.M. ON A THURSDAY NIGHT, A LIGHT burns inside a large building on Route 50 in Hebron, Maryland. There a man sits answering phones, smoking cigarettes, making notes. Something oddly intense is going on here, as the burly man with a white beard fields phone calls from California and New York and Montana. The room is lit with four fluorescent tubes. Lining the walls are metal shelves laden with large bound volumes, an empty tomato juice bottle, a Rolodex and a wall clock. A small radio plays rock 'n' roll oldies. The phone rings steadily, every four or five minutes, well past midnight. The man answers it simply, "Gateway Books."

His name is Bob Mooers. At 59, he is a retired Navy commander, a man who used to work with computers for a living but whose focus now is the printed word. Mooers traffics in old newspapers, and this is the wind-down of the 138th auction he has conducted in 25 years. It's a ritual that begins with a mailed catalogue and ends with frenzied faxes and late-night phone calls as unseen collectors bid against each other. Mooers is their middleman, their broker, in some sense their bookie. He jots down the numbers on small pieces of paper, then reports them item by item as competitors call in, either to raise the stakes, or to yield to the highest bidder.

"I'm tired, my voice is about gone, but I'm hanging in here. It's been busy," he says to a caller at 12:15 A.M. Between calls, he tries to update the lists he keeps in an ancient computer. "They're slowing down," he says at 12:42, but the phone rings again at 12:50. A caller tops a bid of $109, raising it to $120 for an 1844 newspaper reporting Samuel Morse's first telegraph transmission. The calls keep coming: 12:56 . . . 1:05 . . . 1:10. "Yeah, all of a sudden, this thing's come alive again," he tells the California caller, who is in a fierce bidding war with a New Yorker.

Toward the end, only five papers remain, then three, then two, then at last just one U.S. military newspaper reporting the capture of Filipino rebel leader Aguinaldo in 1901. It goes for $65; not the highest priced item but among the hottest. At 1:49, California concedes. "All right, I can go to bed," Mooers says. "You're a sport." At 2:06 A.M., the phone rings again, but this time Mooers doesn't answer. "Time to pull the plug on another auction," he says as he turns out the lights.

Welcome to America off-line. Inside a 20-foot-high steel-sided warehouse, where Mooers has taken me earlier that

Bob Mooers contemplates a stack of old newspapers from his hoard of two million.

Even before the blockbuster movie, newspapers reporting the sinking of the Titanic *were in great demand, and continue to be.*

day, we stand amid shelves and shelves of bound volumes of newspapers. This is not cyberspace. It's real space, 3,750 square feet of concrete. It's well insulated, to keep it cool and dry. Within are some 500,000 papers.

Mooers is an animated and erudite guide through the stacks. In this roadside warehouse on the highway hereabouts known as Ocean Gateway (hence "Gateway Books," referring to the several hundred used books for sale in the shop in front of the building) are editions from all over America, and beyond. He has two trailers full of them, right next door. A few miles away, behind his home, a two-car garage and a workshop hold more. And he has buildings bulging with them in West Virginia and Maryland. He owns maybe two million papers in all.

Mooers was always interested in history, and had even owned a few old newspapers. While holding down a series of assignments as a naval officer and defense official in the Washington, D.C. area, he also owned a small shop selling antiques and books. He bought a few papers to sell. Then he learned that the Library of Congress was getting rid of a large number of newspapers. They were "cut volumes," meaning they had been cut at the spine for microfilming.

All told, Mooers picked up a total of 10,000 volumes for $15,000, and he's been buying not only volumes but sometimes entire library collections ever since. As state, municipal and university libraries shed them, Mooers and others in the small fraternity of old newspaper dealers are actively competing for them.

Collectors, institutions and just plain folks around the country are always in search of old issues. Sometimes the papers serve merely as props in period parties, say from the Roaring Twenties. But people also want a newspaper printed on their birthday—"a little time capsule of the day they were born," Mooers says—or issues from a particular era or chronicling a certain event. Even before the blockbuster movie, newspapers reporting the sinking of the *Titanic* were in great demand, and continue to be, with original issues fetching from $400 to $3,000, depending on the condition and which newspaper carried the story. Lindbergh's 1927 transatlantic flight is another hot subject. Newspaper accounts of the two events are popular even in reprints, of which Mooers has also printed and sold 100,000 and 50,000, respectively.

"I KEEP HEARING MUMBLINGS THERE won't be any hard-copy newspapers in the future," Mooers says, "but I don't think you can replace something you can sit down and relax with. Everything's not going to be saved electronically. Want to know what a pair of shoes cost in 1928, or real estate? Newspapers are your best source."

The truth is that I own a collection of old newspapers myself: 200 or so, I discover both to my horror and delight, as I count them up. This should not be especially surprising, I suppose, given my interest in history, my penchant for collecting, and what I mostly do for a living.

For more than 30 years, I've worked for newspapers. My first job, as Washington bureau librarian of the *New York Herald Tribune*, was to read, clip and file seven newspapers a day. It's a job that no longer exists, as the newspaper morgue has morphed into the News Research Center, where online storage of stories has replaced "the clips."

But I am gratified to learn that at least old newspapers have gone up in value among collectors of these tangible artifacts of history. And why not? The front pages of history show us

DANUTA OTFINOWSKI; P 140 BOY: CORBIS-BETTMANN; NEWSPAPERS, CLOCKWISE FROM LOWER LEFT: NEWSEUM/HARRIETT AND STEPHEN A. GOLDMAN COLLECTION (2); DANUTA OTFINOWSKI (3)

DVD
First we made it possible.
Then we made it portable.
Panasonic brings you the PalmTheater™
portable DVD player. It's the world's first portable DVD theater.
Video Magazine recently said, "Panasonic's DVD-L10 is without doubt
the must-have cool gadget of 1998."
Our four home decks are also technical knockouts. Whether you're
looking for component video out, dts digital out, virtual surround sound
and more, we've got a deck for you.* Audio Magazine said our A310 was
"on measurement after measurement unprecedentedly good."
At home or on the road, Panasonic gives you the ultimate
DVD experience. Panasonic DVD.
It does for movies what the CD did for music.
PalmTheater
Panasonic
DISPLAY MODE
BRIGHT
CONTRAST
OFF AUTO 4 3 ZOOM
SKIP/ SEARCH
PLAY
V.S.S.
ANGLE
STOP
STILL/ PAUSE
PLAY
DISPLAY
City of Angels
available now for sale
or rent on DVD
from Warner
Home Video.
96kHz
24-bit
Audio
DAC
www.panasonic.com/dvd
For information call 1-888-PANA-DVD.
dts
DIGITAL OUT
Dolby Digital is a registered trademark of Dolby Laboratories Licensing Corp.
dts is a registered trademark of Digital Theater Systems, Inc.
*Not all features on all models.
Monarchy Enterprises, B.V. and
Monarchy Entertainment (USA), Inc.
built-in
DOLBY DIGITAL
Panasonic
just slightly ahead of our time

how much has changed, and how little. On a counter, Mooers leafs through a stack of old Denver newspapers. He lands on this headline from a "5:30 EXTRA" of the *Denver Times* for January 20, 1908: "American and Italian Miners in Fierce Battle, 2 DISEMBOWLED." The story is datelined Rock Springs, Wyoming. Another, from the same edition: "RUINED GIRL TAKES POISON ON BABY'S GRAVE" (in black) and "MISSING GIRL STOLEN BY BAND OF GIPSIES" (in red). Anyone decrying the current state of tabloid journalism might be interested to know that standards today aren't much different from a century ago. These old papers are much like any tabloid you might read on the supermarket checkout line, but maybe even more so. "Is that a scandal sheet!" says Mooers. "I'd say this would qualify for the oldest scandal sheet, except I've had 1817-1818 papers telling tales on people."

MOOERS SHOWS ME ISSUES OF THE *Denver Republican* from 1900, reporting a black-on-white murder that leads to a burning: "PORTER, PRAYING FOR HIS TORTURERS, DIES AT THE STAKE . . . " proclaims one headline. "You could teach a high school class more about civil rights with these papers than with half the textbooks on it," he says.

From Mooers I learn something about handling my own collection. It turns out I've been storing it all wrong, or at least partly wrong. I've pretty much kept my papers in boxes away from the light, which turns them brown. But I've kept them folded instead of flat, and sure enough, some have crumpled at the crease. I keep mine in our cool basement. The worst place to store them, according to Mooers, is the attic. "They get cooked up there."

Often the older a paper, the better its condition. That's because before wood pulp newsprint, which deteriorates easily, printing was done on rag paper—literally made from fabric. On the other hand, silverfish and bookworms prefer rag paper to newsprint.

Condition is less a factor when it comes to determining the value of old newspapers than it is with other collectibles, say baseball cards. There are other factors: an "event" paper from where the event occurred ranks higher than the same-day paper from another city. So a *Dallas Times-Herald* reporting on the John F. Kennedy assassination is worth more than a Wichita or Pittsburgh paper chronicling the event. And a newspaper with no historic event at all is valued only for the "atmosphere" it exudes.

As we talk, I think of all the newspapers I've acquired and can't relinquish: the *Washington Herald* with its two-tier, boldfaced headline proclaiming President Harding's demise: "THE PRESIDENT IS DEAD/ VICTIM OF APOPLEXY." Or the dozen or so faded papers with Hearstian headlines from the Spanish-American War that I purchased for a quarter apiece some years back. Or the newspapers I have simply saved, from events I rated historic: Presidential elections or inaugurations, the end of the Iran hostage crisis, the moon landing.

I have no idea of their worth, but their intrinsic value is incalculable. To me, they are priceless, because of what they are: history come alive. Ultimately, I conclude that the market value of old newspapers is essentially irrelevant. Care to invest in collectibles? Choose coins, or stamps, or baseball cards. Papers, by comparison,

DAILY MIRROR FINAL
PROHIBITION ENDS AT LAST!
Honolulu Star-Bulletin 1st EXTRA
WAR!
OAHU BOMBED BY JAPANESE PLANES
SAN FRANCISCO, Dec. 7.–President Roosevelt announced this morning that Japanese planes had attacked Manila and Pearl Harbor.
SIX KNOWN DEAD, 21 INJURED, AT EMERGENCY HOSPITAL
Attack Made On Island's Defense Areas
Hundreds See City Bombed
Names of Dead and Injured
THE NEW YORK HERALD.
THE TITANIC TORN ASUNDER WHEN SHE STRUCK ICEBERG GOING AT 18-KNOT SPEED

Papers reporting these three historic events are among the most sought-after. Mooers rates the *Titanic*'s sinking at $500; the Pearl Harbor attack, $200; Prohibition's end, $60.

Smithsonian Magazine is pleased to present

Distinctive Gifts

A collection of unique holiday gift ideas ...just in time for the holidays.

Distinctive Holiday Gifts Are Only A Phone Call Away!

Encyclopaedia Britannica

Always the best information —now the best value.

Bring Encyclopaedia Britannica into your home and give the gift of learning. It's easy with the *Britannica Ready Reference* – a 12 volume A-to-Z encyclopaedia for only $499. Ready Reference has over 64,000 articles on practically every single topic imaginable. And as your family's appetite for knowledge grows, satisfy it with either the rest of the 32-volume print set, the Britannica CD, or Britannica Online. Call the number below for more information.

1-800-808-4352

Imperial Collection
by Tatiana Fabergé

Fabergé...perhaps the greatest craftsman ever.

As jeweler to the Imperial Russian Court, he fashioned exquisite works of art. Now the tradition lives on with the *Imperial Collection* by Tatiana Fabergé, Carl Fabergé's great granddaughter. This beautiful pendant (shown actual size) of periwinkle blue enamel is accented by Austrian crystal leaves in a black enamel band. Includes 18" gold plated chain, signed certificate. $38.50 plus $4 S&H. Satisfaction guaranteed. Write to:

The Imperial Collection, Dept. SM1198, P.O. Box 7416, Wilton, CT 06897-7416 or call the number below.

1-888-625-2608

The Rose Lady

A real rose, dipped in 24k Gold ...everlasting, just like love.

A fresh rose is transformed into a beautiful work of art through a 3-5 day long electroform process. Your rose is hand-dipped into copper, nickel, & then 24k gold (cost: $69.) We also carry other natural objects preserved in 24k gold, including pinecones ($18) which make beautiful holiday ornaments. The Rose Lady *Collections* offer unique and distinctive gifts of nature to commemorate any occasion. Fax The Rose Lady, toll free: 877-767-3523, visit us online: **www.theroselady.com**, or call us at the number listed below:

1-888-767-3523

Kosta Boda

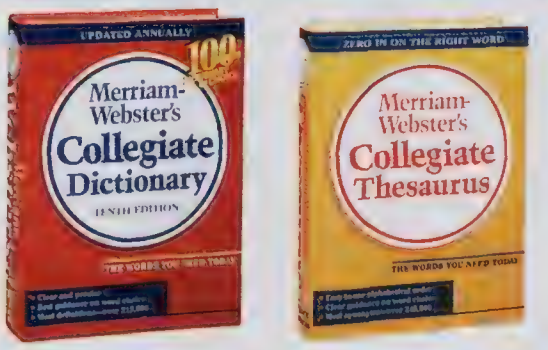
Kosta Boda's *Mysterious Envoys*

is the introductory collection of Mini-Sculptures by internationally acclaimed glass artist, Bertil Vallien. Each collectible, handcrafted at Kosta Boda's glassworks in Sweden, is a colorful symbol of the mysteries of life, and is signed and delivered with a certificate of authenticity.

For your complimentary *Mysterious Envoys* catalogue, which offers introductory prices and special gifts by Bertil Vallien, call the number listed below:

1-800-351-9842

Merriam-Webster Inc.



Give the gift of effective communication

with Merriam-Webster's Collegiate® Dictionary, & Merriam-Webster's Collegiate® Thesaurus. You can rely on the language experts at Merriam-Webster for authoritative references of the highest quality. Updated annually, the Collegiate is America's best-selling dictionary with over 215,000 clear and precise definitions. The *Collegiate Thesaurus* makes a perfect companion, featuring easy-to-use alphabetical order. Visit your local bookseller, order direct from *Merriam-Webster Online* at www.m-w.com, or call the number below today.

1-800-201-5029

The Fort Worth Press
FIRST EXTRA EDITION
EUROPE INVADED
Invaders Swarm Ashore Between Cherbourg And Le Havre Under 11,000 Airplane Cover
BROOKLYN DAILY EAGLE
LINDBERGH AT PARIS IN 33½ HOURS; SLEPT ON WAY; RAN THROUGH STORM
'HERE WE ARE,' HIS FIRST GREETING TO FRENZIED THRONG
BELLANCA FLIGHT OFF," SAYS LEVINE AFTER NEW SPLIT
THE COMMERCIAL APPEAL
Death Captures Crown Of Rock And Roll —Elvis Dies Apparently After Heart Attack
Elvis Went From Rags To Riches
'Are You Sure There's No Mistake?' —The Desired Answer Never Came
'Unclassifiable' Sound Pervaded Elvis' Career
Alabama's Judge Johnson Chosen As New FBI Chief
A Legacy
The Wrather
Final Review

Good headlines and graphics increase the value of vintage newspapers. Mooers' price tags: D-day, $150; Lindbergh's flight, $100; the death of Elvis Presley, $20.

are cheap and likely to remain so. There are pitfalls. Reprints, for example. They are the bane of collectors, who try to detect them. Among the most reprinted papers is the Vicksburg, Mississippi, *Daily Citizen* published during the Union siege in 1863. Newsprint had become so scarce that wallpaper had to suffice. When Union troops overran the town, they printed an edition reporting their victory and suggesting readers keep their copy because it could become valuable. It sure did. Originals sell for as much as $2,000. But caveat emptor: reprints abound.

One of the greatest ironies of collecting old newspapers is that, today, many of them are sold on-line. (Mooers has recently gotten into online sales, but he still mails 12 catalogues a year.) You can click on any number of lists and pages on the World Wide Web to see what's hot and what's not, to read detailed descriptions of newspapers for sale, and prices.

Collectible Newspapers, the publication of the Newspaper Collectors Society of America, went on-line in late 1995 and closed its print edition in 1997. Editor-publisher Rick Brown wrote subscribers that it was all a matter of economics, and he offered to sell the entire 13 1/2-year run of the periodical for $150. Those unsold would be moved to his attic. "In 15 years or so," he wrote in the last hard-copy edition, "I will again offer them as scarce collectibles."

I suppose it had to happen sooner or later that libraries would run out of space to store old newspapers. Microfilm led to deaccessioning in the 1970s, according to Joe Napik, Mooers' assistant. From time to time, though, sales still occur. Mooers bought 4,000 bound volumes from the Minneapolis public library and bid, unsuccessfully, in a Kansas State Historical Society auction in 1997.

SAYS PATRICIA MICHAELIS, director of the historical society's library and archives: "It was a very difficult decision. In 1995, we moved to a new, smaller facility, and we were paying $25,000 a year for off-site storage. The deterioration of these newspapers had accelerated, and it was a losing battle. Intellectually, I feel good about what we've done. Emotionally, a lot of people don't want to give up that item from 1901."

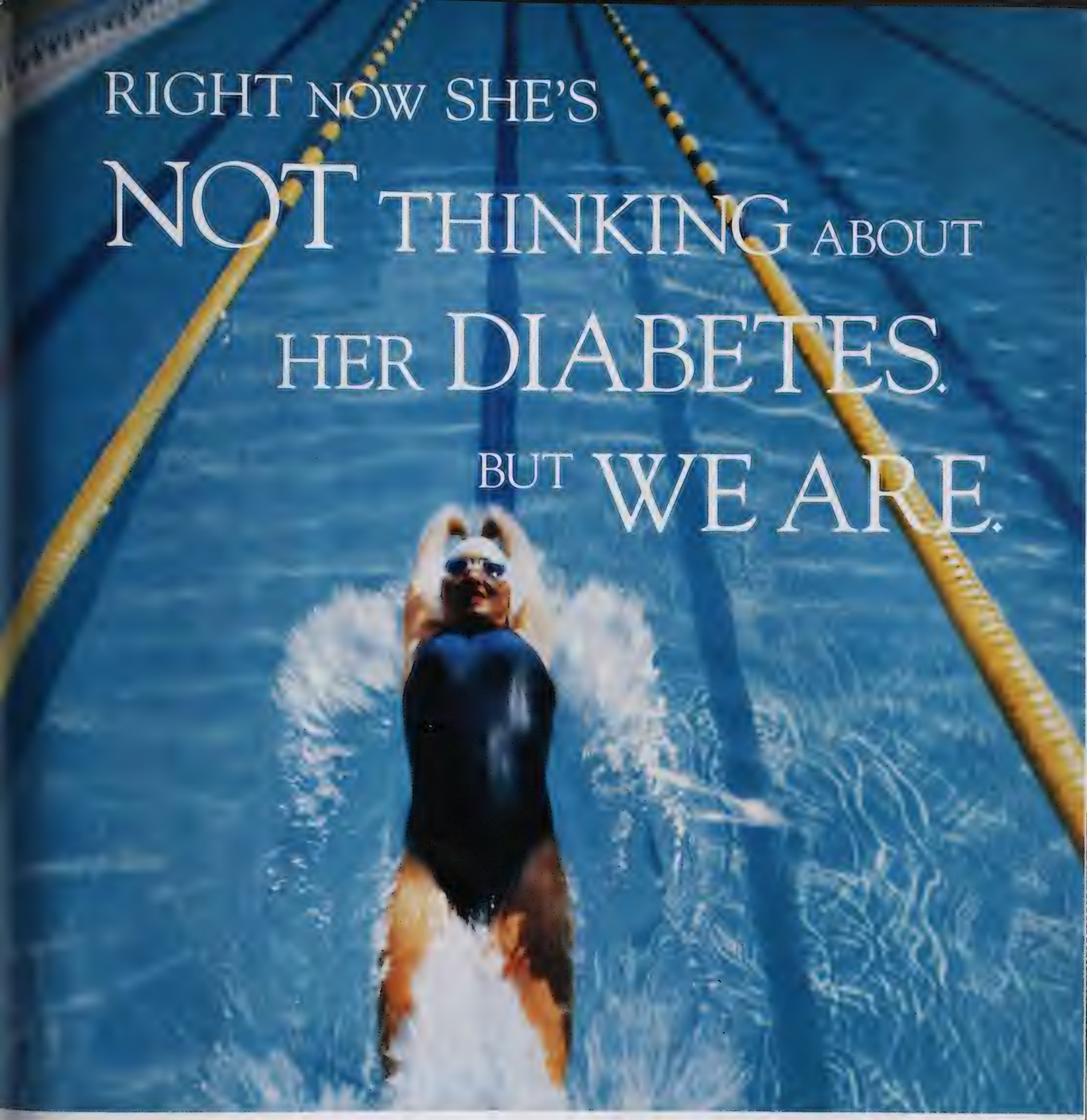
So up for auction many of them went. From 33 bidders, the society got $53,000 for 2,000 volumes. "At first," says Michaelis, "we didn't know if there was any market." Indeed, sometimes it seems there isn't any.

A lot simply get trashed. Mooers threw away a bunch of Swedish papers, hauling them by the truckload to the dump after he'd called the Swedish Embassy and written to Swedish dealers, and elicited no interest. "Then," he says, "some guy came out looking for Swedish papers because of some comic strip he wanted." But, to be practical, Mooers says, "when you put a roof and four walls around something, it costs you money every month. You reach a point of no return."

But Mooers still buys newspapers by the truckload, as he did last fall when he acquired, sight unseen, oh, 79,000 pounds of papers from the Historical Society of Pennsylvania and the Library Company of Philadelphia. It was a daunting task: bound volumes were removed from shelves, placed six to eight in a cart, rolled down a long hall to an elevator, then down another long hall and out a ramp to the sidewalk. It was a sweaty, dirty job that took two tractor trailers, and a crew of five laborers and 15 hours just to load up.

"We'll commence to organizing and selling it," says Mooers, who keeps most of the Philadelphia haul in his garage. "It'll take years, but it'll disap-

NEWSEUM; DANUTA OTFINOWSKI; NEWSEUM



Diabetes is the sixth leading cause of death in the U.S. It's a disease that causes diseases: heart attack, stroke, loss of limbs, blindness, and kidney failure. Today, pharmaceutical company researchers have discovered new medicines that help manage diabetes for the 15 million people who have it. So there are fewer and fewer cases of the diseases that come with diabetes. These medicines allow people with diabetes to lead more normal lives. Now, the challenge for researchers is to discover a cure. And we won't stop thinking about a cure until we find it.

America's Pharmaceutical Companies

Leading the way in the search for cures

www.searchforcures.org

Visitors at the Newseum in Arlington, Virginia, peruse front pages from around the world. Copies are transmitted digitally each day from every state and 20 countries.

pear. We buy these things for the long term anyway." And, of course, there's always the dumpster.

FOR VERY SPECIAL EDITIONS, there's also the Newseum in Arlington, Virginia. Opened in April 1997, this is the Freedom Forum's 72,000-square-foot shrine to the news business, past and present. The visitors browse in the Newseum shop, purchasing reprints of the *St. Louis Post-Dispatch* "*Titanic*" edition. Immediately adjacent, 70 enlarged copies of today's front page from papers around the United States and abroad cover an entire wall. Upstairs, in the News History Gallery, the crowd moves slowly and quietly along a wall that features famous front pages from American history. There is an intensity that seems to drive the visitors as they read, panel to panel.

Frank E. Marcum, a 55-year-old high school history teacher from Tulsa, Oklahoma, takes nearly an hour to look at every front page. The lanky, gray-haired Marcum doesn't consider himself a collector but says he has 75 or 80 newspapers, "just major events I've lived through or been part of," from Vietnam to the *Challenger* space shuttle disaster of 1986. Turns out, he was a candidate for the Teachers in Space program along with Christa McAuliffe, who died in the shuttle explosion. "I've probably got 40 or 50 just of those," he says of the *Challenger* papers.

"It's not like I set out to collect," he says as he scans those on display. "It's just part of my life."

The papers on view are under glass and dimly displayed, so as to prevent light damage. Eric Newton, the Newseum's "managing editor," explains the newspaper-collecting food chain, in which dealers buy from archives and sell to collectors. "We're a displayer," he says. "We'll borrow and display papers that tell stories as part of the history of news, and then return them."

Newton, it turns out, like me, Marcum and others, is an incidental collector of newspapers. "I have probably a thousand papers stored in my basement in boxes," he confesses a bit sheepishly. "I just couldn't throw them out."

Eugene L. Meyer wrote for SMITHSONIAN *about women who fought in the Civil War by disguising themselves as men.*

Marcum doesn't consider himself a collector but says he has 75 or 80 newspapers, "just major events I've lived through or been part of."

DANUTA OTTINOWSKI

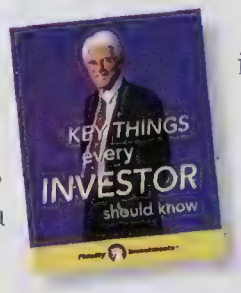
People are always

asking me for hot stock tips.

I tell them buying what's hot without research isn't investing, it's gambling.

Get your copy of *"Key Things Every Investor Should Know™"* today.

Hot stock tips can come from anywhere. That's why you need to do your homework before you invest, instead of just reacting to the latest trends. Fidelity can help you



invest according to what's right for you. So if you're ready to stop gambling, get your copy of Fidelity's *Key Things Every Investor Should Know™* today.

Fidelity Investments®

WHERE 12 MILLION INVESTORS PUT THEIR TRUST.™

CALL 1-800-FIDELITY

OR VISIT US AT WWW.FIDELITY.COM

Fidelity Brokerage Services, Inc., Member NYSE, SIPC.

59303

TOGETHER THEY STAY A WORLD

FOR THE HUTTERITES,
THE WAY TO HEAVEN
LIES THROUGH FAITH,
COMMUNAL LIVING
AND A LOT OF HARD WORK

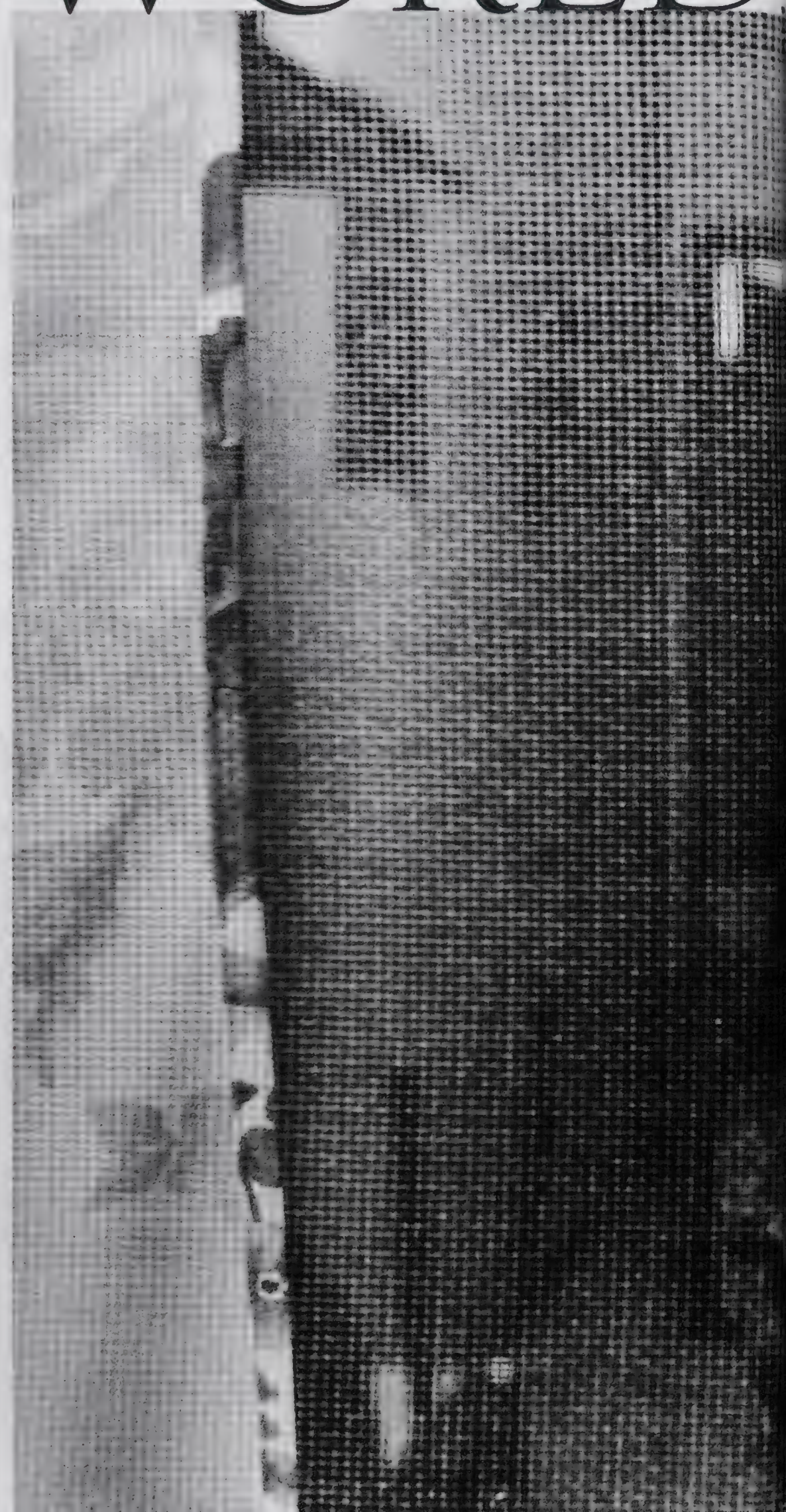
A YOUNG GIRL, HER HAIR TIGHTLY rolled and covered with a scarf, gazes out a screened door. Her dreamy look is typical of millions of American children. Her clothes mark her as different. She is a Hutterite.

To be a Hutterite is first of all to be a member of a community, a tiny part of an integrated whole. In small colonies these Christians live in shared buildings, eat in common dining rooms, labor and worship together. They hold no personal property, and have little contact with those outside their community. This, they believe, is God's plan.

Like the Amish and Mennonites, the Hutterites are descended from the 16th-century Anabaptists, whose condemnation of infant baptism made them heretics. These pacifists take their name from an early leader, Jacob Hutter. After moving around eastern Europe for three centuries to avoid persecution, they immigrated to the United States in the 1870s.

They have thrived here. More than 35,000 Hutterites now live in roughly 400 colonies in Montana, Washington, the Dakotas, Minnesota and western Canada. Most Hutterite colonies support themselves through agriculture, some through the manufacture of such salable items as hog feeders and coal boilers. No one draws a salary for this work; each person's needs are provided for by the colony.

Photographer Andrew Holbrooke has visited several Hutterite colonies. His images reveal a people whose distinctive ways unite them, and the charm of small moments in a life apart. —*Alison McLean*



Photographs by Andrew Holbrooke

APART

Children are taught from an early age the central importance of prayer and work in a Hutterite community. Each day in a colony begins and ends with prayer, in recognition that the first duty of the faithful is obedience to God. Below: In Alberta, Canada, a mother supervises her children at evening prayer before putting them to bed; nuclear families typically live in small apartments in a communal building. Right: Children beyond the age of 6 are expected to help with chores, as does this young boy dragging a wire gate closed after feeding sheep at his colony in Montana. By the time a Hutterite asks to be baptized and to join the church formally, at about age 20, he or she has become fully attuned to the patterns of the community.

Top left: Freshly baked loaves borne by the baker and a helper in a Montana colony will be sold at a farmers' market in Great Falls. The day begins early for those assigned to do the colony's baking; they may start mixing the dough at 3:30 A.M. Bottom left: Hats line the rail that divides the men's side of the communal dining

room from the women's in another Montana colony. As in all Hutterite communities, the adults eat their meals together, seated according to gender and age. The women, who keep their heads covered, prepare the food in the central kitchen. Above: Picking the last of the season's squash before it is killed by cold weather is a group project for these Hutterite women. In winter when there is less farmwork, a colony's labors may focus on improving the buildings.

The work of a Hutterite colony is divided along traditional gender lines, and is usually performed in accordance with a strict schedule. In this Montana colony, the women do laundry twice a week in the group's large machines (above). Unlike the Amish, the Hutterites have incorporated much modern technology into their lives. Their buildings are electrified, their farm and manufacturing equipment up-to-date; some colonies have Web pages on the Internet. Right: The day's work over, a beaming girl steals a glance at a bashful friend. When the time comes for marriage, most young people will find a spouse from another colony. The bride will then go to live in her husband's colony.

CHIEF JUSTICE MARSHALL TAKES THE LAW IN HAND

BY ROBERT WERNICK

UPSETTING PRESIDENTS AND SETTING PRECEDENTS, HE HELPED FORGE A NATION

IF YOU HAVE BEEN BROUGHT UP pledging allegiance to the flag and the Republic for which it stands, "one nation under God, indivisible, with liberty and justice for all," there is a certain surprise in reading the Constitution and finding that it nowhere contains the word "nation" (or, for that matter, the word "God").

The Constitution was ratified—though just barely—in 1788, but it took Americans years to decide what this new political experiment was actually going to be. Would it be a cluster of confederated republics? Or a nation in the traditional sense, like France or England?

Today we know what happened and take the result for granted. Yet in 1804, it was the subject of bitter debate, and no less a personage than Thomas Jefferson, the President of the United States, could write, "whether we remain in one confederacy or form into Atlantic and Mississippi confederations, I believe not very important to the happiness of either part."

The definitive answer binding upon all Americans was written in torrents of blood during the Civil War. Long before that, however, the question began to be answered, and a crucial moment in the gradual shift toward nationhood can be pinpointed to a few months in the year 1803, when two great Americans, who detested each other, took separate and independent actions ensuring that a nation, one and indivisible, would eventually result.

One was Thomas Jefferson, third President. The other was John Marshall, fourth Chief Justice of the United States.

As Chief Justice for 34 years, John Marshall (left) strove to increase the power of the federal government and the Supreme Court; his rival Thomas Jefferson (above) believed in states' rights.

In February of that year Marshall handed down a decision in a case called *Marbury v. Madison*. That was the first time the Supreme Court declared unconstitutional a law that had been duly passed by Congress and signed by the President. A few months after *Marbury v. Madison*, Jefferson deliberately exceeded what he was pretty certain were the powers of the Presidency, as defined by the Constitution, by buying Louisiana from Napoleon Bonaparte for $15 million.

Jefferson, of course, is one of the most famous figures of American history: his face is on the nickel, his memorial stands in white marble splendor across the water from those of Washington and Lincoln. The graces and crotchets of his character are well known to us. John Marshall, on the other hand, remains an austere and shadowy figure, remembered almost exclusively for having written a handful of brilliant and decisive opinions, their details familiar mainly to historians and constitutional scholars. Just lately, however, perhaps because the role and functions of the Supreme Court are under such hot debate, Marshall has reappeared in the public eye. Two books, *John Marshall,* by Jean Edward Smith, and *The Great Chief Justice,* by Charles Hobson, have been published, and they help bring him to life not only as a justice but as a towering, many-talented and very appealing figure.

Marshall came from the same Virginia stock as Jefferson; they were in fact second cousins once removed. But their political opinions were as far apart as their characters. Unlike Jefferson, a slaveholding aristocrat born to wealth, Marshall, the oldest of 15 children, came from a frontier community and was a self-made man. For various reasons, Jefferson did not fight in the American Revolution. As ambassador to France, he was not at the Constitutional Convention of 1787 (SMITHSONIAN, July 1987). Marshall had played a major role in ratifying the Constitution. He was, moreover, tempered by war, having served with George Washington at Valley Forge, and he had to work hard to establish himself as a successful Virginia lawyer. In 1798 President Washington virtually ordered him to run for a seat in Congress.

Marshall remained something of a frontiersman all his life, tall, rangy, plainspoken, self-reliant. Before being appointed to the Supreme Court by President John Adams, he had not only been a frontline soldier, lawyer and legislator but a land speculator, diplomat, pamphleteer and John Adams' Secretary of State. He briefly became a national hero in 1797 when, as one of three American envoys sent to Paris to negotiate a treaty with the government of revolutionary France, he ran up against Citizen, ex-bishop and foreign minister Charles Maurice de Talleyrand. The slippery Talleyrand informed him through three emissaries that America would get the treaty only if it suitably greased Talleyrand's palms. The three emissaries were code-named X, Y and Z. Marshall took the lead in bluntly rebuffing this shakedown as dishonorable and an affront to the United States of America. Marshall's tensely worded message home was later summed up by a memorable sound bite, "Millions for defense, but not one cent for tribute." Americans were so outraged at the French behavior that war was threatened, all of which further stirred Jefferson's ire at Marshall, perhaps because Jefferson had a weakness for all things French. He was angry enough to claim the whole thing was "a dish cooked up by Marshall." The country knew better. On his return Marshall was lavishly honored by

In a romanticized re-creation, Marshall is characterized as the ill-clad orator; no doubt, he is delivering a persuasive speech to his dapper audience.

LIBRARY OF CONGRESS, P. 156 ARCHITECT OF THE CAPITOL; P.157 BOWDOIN COLLEGE MUSEUM OF ART

enthusiastic crowds in Philadelphia, then the nation's capital.

Jefferson often dealt with him vindictively. He even used to run down what he called Marshall's "lax lounging manners," partly because Marshall was as perfectly at home in a rowdy tavern as in a law court or an elegant Paris salon, and got on with everybody. On election day Marshall was the candidate who offered the best whiskey to the voters. There were no fancy airs about him. He was famous for his slovenly dress. He often did the shopping for his ailing wife, Polly, a rarity for a man of his standing. They liked to tell the story of how a dandified young man came up to him in the Richmond marketplace once and, not knowing him, said, in effect, "Here, my man. Just take this turkey to my house," and flipped him a coin. The Chief Justice of the United States cheerfully pocketed it and delivered the turkey. It was on his way.

GRANGER COLLECTION

In 1838, Cherokees trek west in Robert Lindneux's *The Trail of Tears*. Marshall had declared Georgia's Indian policies unconstitutional, but the state ignored him.

Jefferson, by contrast, lived beyond his means and was always in debt. He envisioned himself as the representative of poor farmers and the slave-owning, agrarian South, telling them that moneyed interests and manufacturers in the Northeastern cities were up to no good. The

BIG coffee drinkers
don't need
BIG coffee makers.

THE NEW 4-CUP KITCHENAID® COFFEE MAKER.
FOR COFFEE LOVERS,
GOOD THINGS NOW COME IN SMALL PACKAGES.

- *Reinvented brewing process for maximum flavor*
- *Easy-to-clean basket* • *Pause and pour feature*

also available in black

Want to talk more?
1.800.541.6390 or www.KitchenAid.com

KitchenAid®
For the way it's made.

®Reg. trademark/TM trademark of KitchenAid, U.S.A. ©1998 KitchenAid.

Expand *your* universe with the revolutionary Meade® ETX™ Telescope

Observe land, sea or sky in stunning high-resolution detail with the world's best-selling modern telescope.

Explore hidden corners of the universe with the Meade ETX. As *Sky & Telescope* reported, *"The Cassini Division in Saturn's rings popped into view...I could see every wisp of velvet on the antlers of a deer 50 feet away...the ETX [is] an ideal all-purpose telescope for anyone wanting to inspect eagles at 100 yards or stars at 100 light-years...a compact, portable telescope with first-class optics."* The Meade ETX: there's no other telescope like it in the world.

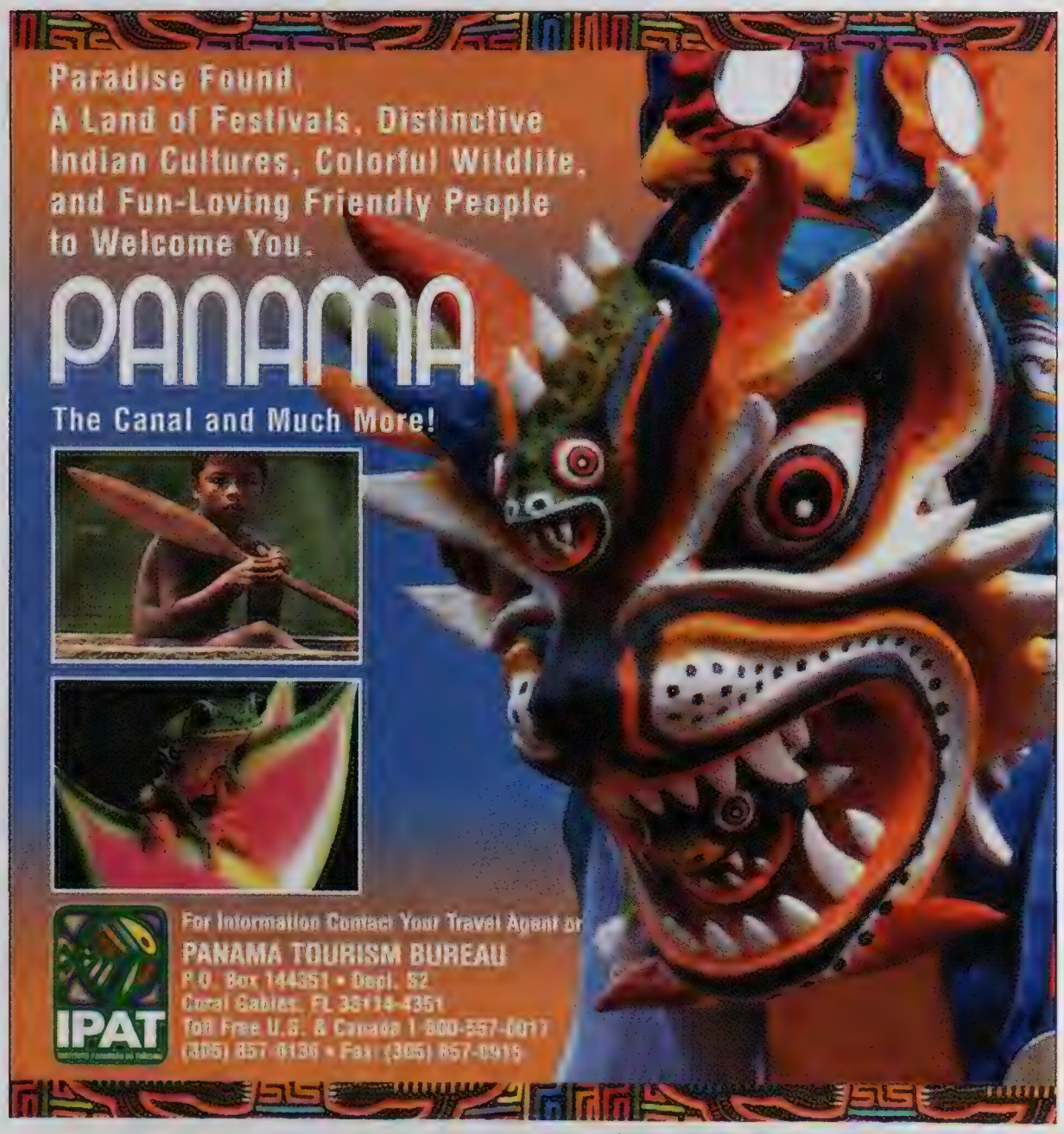
See it now at over 1000 Meade dealer locations in the U.S.A. and Canada, including

THE NATURE COMPANY®

1-800-367-6178

MEADE

Call **1-800-62-MEADE** for a free copy of **Meade Telescope Catalog #134** or for other dealer locations near you. ETX Telescope: $595; shown with optional camera adapter. Other premium-quality Meade telescopes from $100 complete. Meade Instruments Corp., 6001 Oak Canyon, Irvine, CA 92620. FAX: (949) 451-1460.
www.meade.com © 1998


Paradise Found.
A Land of Festivals, Distinctive Indian Cultures, Colorful Wildlife, and Fun-Loving Friendly People to Welcome You.
PANAMA
The Canal and Much More!
IPAT
For Information Contact Your Travel Agent or
PANAMA TOURISM BUREAU
P.O. Box 144351 • Dept. 52
Coral Gables, FL 33114-4351
for Free U.S. & Canada 1-800-357-0017
(305) 857-0136 • Fax: (305) 857-0915

Louisiana Purchase notwithstanding, Jefferson thought—like some extreme conservatives of today—that the government had no right to do anything not spelled out in the Constitution.

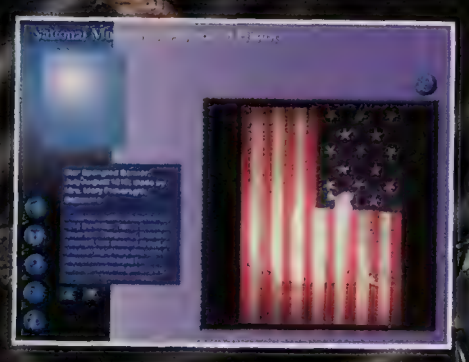
Marshall had learned sacredness of contracts and the value of sound money as a self-made lawyer. During the starvation winter at Valley Forge, Marshall watched local farmers selling food to the British in Philadelphia—who had real money to pay for it—rather than accept the worthless paper issued by the Continental Congress, which did not have the right to tax. He had a lifelong conviction that a country needs a central government with power and responsibility enough to override local interests.

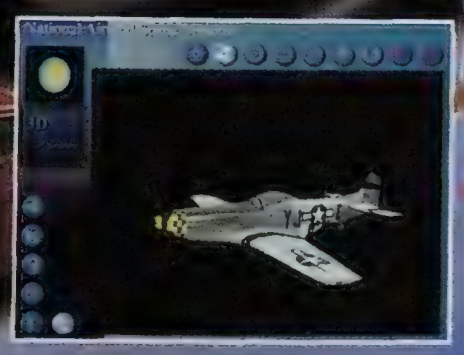
This was the view of his political party, the Federalists, who believed that the Constitution had authorized the formation of a federal government able to pay the country's debts and provide for its defense. They cited the Preamble to the Constitution as well as Article 1, Section 8, which both asserted that the document's purpose was to "provide for the common Defense and general Welfare." For Federalists, that seemed to cover all sorts of federal initiatives. Jefferson and his party, the Republicans, hated the very idea.

For Jefferson the states were sovereign. It was thus up to any individual state to determine the extent of its powers in settling disputes between the federal and state governments. Though Marshall was not an extreme Federalist, he saw that as a recipe for anarchy. Such decisions, it followed, could best be made by an independent judiciary. Judges, presumably, had nothing to gain from their actions; they alone could be impartial umpires. The heart of the judiciary was the Supreme Court.

In those early years of the Republic, however, the Supreme Court had none of the authority it enjoys today. It heard cases for a few weeks each year; the judges also had to serve as circuit court judges in various legal

Take Home The Smithsonian Museum Collection ...Just In Time For The Holidays!





In 3-D On CD-ROM

View, for the first time, an amazing collection of artifacts from all the Smithsonian Museums and the National Zoo, in full interactive 3-D. See the rich textures, the intricate details, and all the many unique elements of the original artifacts in ways they have never been seen before. Use this amazing new technology to move and view objects as if they were in the palm of your hand. You can even take precise measurements of a selected object and then look inside to examine its inner framework!

- More than 650 images included
- Fascinating video footage from the National Zoo
- Examine many never-before-seen artifacts released by the Smithsonian

Smithsonian

Call **1-800-582-6642** for fast and easy ordering. Only $24.95 + $5.95 each shipping and handling. Source Code V959

Copyright © 1998 Christopher Raphael, Inc. and the Smithsonian Institution. All Rights Reserved. RVR.™ VRX,™ DIRECTOR® Copyright © 1994, 1997 Macromedia, Inc. Source code V959.

districts. When gathered in the raw city of Washington they all lived together in a ramshackle boarding-house. Even when the Capitol eventually went up, the Court's quarters were far from supreme; a first-floor committee room served until 1810, and then the justices found themselves in a dark, cramped space beneath the magisterial halls of Congress.

The justices had a tradition in their conferences; they would have wine only when the weather was bad. If it was sunny out, though, Marshall would sometimes say to his colleagues: "Our jurisdiction extends over so large a territory that the doctrine of chances makes it certain that it must be raining somewhere."

Marshall's charm, his taste in wine and whiskey, along with his formidable intellect and legal learning, won

The Court had a tradition in their conferences; they would have wine only when the weather was bad.

the support of colleagues, many of whom, as the years went by, were expressly appointed to disagree with him. In 34 years on the bench he was obliged to write only one dissenting opinion in a constitutional case.

John Adams appointed him Chief Justice shortly after being defeated by Jefferson in the Presidential election of 1800. Marshall was then Secretary of State, and Adams asked him to stay on till the new Republican administration took over on March 4, 1801. Adams appointed other Federalists at the last minute as well, including one William Marbury, named justice of the peace for the District of Columbia. The nomination was approved by the Senate the day before Jefferson's inauguration. Marbury's commission was duly made out and

In the little bit of Paradise that is the British Virgin Islands, the most captivating little hotels, inns, villas and cottages abound. Usually within a sand pebble's throw of the most beckoning blue you've ever seen. From the modestly priced to the self-indulgent, you'll find sheer perfection. Call 1-800-888-5563, ext. 457 for our Intimate Inns and Villas guide.

THE BRITISH VIRGIN ISLANDS
NATURE'S LITTLE SECRETS

SMITHSONIAN INSITES
www.smithsonianmag.si.edu
The advertisers listed below invite you to connect with them on the world wide web for additional information about their products and services.

BackSaver
Over 50 Back Saving Ideas for Your Home, Office, and Personal Needs.
www.backsaver.com

Canon
www.ccsi.canon.com

GEVALIA® KAFFE
FINE COFFEES OF EUROPE
www.gevalia.com

JACK DANIEL'S
JACK DANIEL DISTILLERY
www.jackdaniels.com

LEGG MASON
www.leggmason.com

MasterCard
www.mastercard.com

NCL NORWEGIAN CRUISE LINE
www.ncl.com

NUVEEN
OUR SECOND CENTURY
www.nuveen.com

Pella VIEWED TO BE THE BEST.™
www.pella.com

PHILIPS PHILIPS
www.philipsusa.com

PENTAX
www.pentax.com

Sea Island® THE CLOISTER®
www.seaisland.com

Tektronix®
www.coloratwork.com

signed by President Adams at the very end of his term. As Secretary of State, Marshall affixed the great seal of the United States to it. But in the rush of events leading up to the transfer of power, he left it on his desk and didn't send it out.

Jefferson was an intensely partisan politician, and he was greatly annoyed by the last-minute appointments of Federalist judges. He regularly accused Federalists of wanting to establish a monarchy and cozy up to Great Britain. He wanted to be rid of all Federalists, Marshall especially.

Jefferson simply ordered that the commissions not be delivered. Marbury was out of the job, and after nine months he turned to the law. He requested that the Court issue a writ of mandamus (in Latin, "we command"), which by law compels a government official to perform a duty. Marbury wanted the new Secretary of State, James Madison, to be forced to deliver to him his duly signed and sealed commission. The result was *Marbury v. Madison*, a case that called forth heated political invective between Federalists and Republicans. It was also a ticklish matter for the new Chief Justice, who handled it with the intellectual grip, clarity of reasoning and political adroitness that would mark his whole career. His method was always to narrow his focus, brushing aside the extraneous, until he got to the precise point on which a case turned. In *Marbury,* he managed to find an elegant legal solution that gave something to both sides.

Article 3 of the Constitution had established a Supreme Court but left the organization of other courts to be defined by Congress. An early attempt was the Judiciary Act of 1789, which, in addition to creating some district and circuit courts, in Section 13 took up some of the Supreme Court's jurisdictions, and granted it the power under certain circumstances to issue writs of mandamus "to persons holding office under the

WOW! I Can't Believe You Have That CD!

EveryCD is a wholesale music club offering members an 850-page catalog containing virtually every CD in print. We have the CD's you've been looking for but could never find. We also have the last CD you bought - for a lot less! All CD's are available at wholesale prices. We never send unsolicited CD's and there is never any minimum to order.

Please call 1-800-Every-CD or visit our web site at www.everycd.com to begin your free trial membership.

1-800-EVERY-CD
www.everycd.com

NEW! Complete DVD and VHS movie library now available.

©1998 EveryCD

Back Saving Ideas

BackAide,® fully adjustable back and seat support for stress-free travel.

Relax 'n Read back support for customized comfort in bed.

OVER 50 BACK SAVING IDEAS FOR YOUR HOME, OFFICE, AND PERSONAL NEEDS.

FREE CATALOG
1-800-251-2225
www.backsaver.com

BackSaver

Dept. 02

the Packable Sac-Hat™

A raffia hat in a sac. Elasticized sweatband for a comfortable fit. *Great for travelling.*
Price $45.00 plus s/h
Corroboree Hat Co. • Ph.1-877 4 Sac-hat
additional Men's and women's styles. free catalog

Archaeological Tours
LED BY NOTED SCHOLARS
1999 TOURS

EGYPT, Jan, Feb & Nov
MALI, Feb
GUJARAT INDIA, Feb
MAYA KINGDOMS, Mar
SYRIA & JORDAN, Apr, Oct
CLASSICAL GREECE, May
MALTA, SARDINIA & CORSICA, May
WESTERN TURKEY, May, Oct
CYPRUS, CRETE & SANTORINI, May
SICILY & SOUTH ITALY, May, Sep & Oct
YANGTZE RIVER, May
TIBET, June
PORTUGAL, June
EAST TURKEY, June
INDONESIA, July
PERU, Aug
BRITTANY, Sep
CAVES & CASTLES, Sep
CENTRAL ASIA, Sep
ANCIENT CAPITALS OF CHINA, Oct
ISRAEL, Nov
YEMEN, Nov
NORTH INDIA, Nov

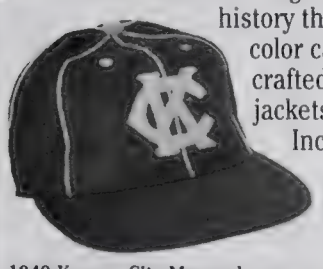
archaeological tours
271 Madison Ave., 904SM, NY, NY 10016 (212) 986-3054

Celebrate July 4th & All Events
CARBIDE CANNON
BIG BANG! $139.95

Mammoth Cannons shoot with terrific BANG! Have a bang-up time at special events. Uses powdered carbide ammo. Hundreds of shots for few cents. All metal construction with large, rugged cast iron wheels. Machined brass mechanism for easy loading and firing. Authentic turn-of-century design. Handsome decor when not in use. Made in USA to last a lifetime. Available in 3 sizes: 9" cannon, **$59.95 postpaid;** 17" cannon, **$109.95 postpaid;** 25" cannon (shown here) with rapid firing and automatic loading, **$139.95 postpaid.** The larger the cannon the louder the bang! **Carbide ammo, about 100 shots, $7.50; 3-pack $18.00. Spark plugs, 3-pack $2.00.** Send check, money order or call. Visa, MasterCard accepted by mail or phone. Give card number & expiration. Money-back guarantee. Send for **FREE CATALOG!**

The Conestoga Co., Inc., Dept S, PO Box 405, Bethlehem, PA 18016
★★ Call 1-800-987-BANG ★★
www.bigbangcannons.com

WEAR A PIECE OF
BASEBALL HISTORY
Discover the rich legacy of baseball's history through our 48-page color catalogue of hand-crafted historical jerseys, jackets, ballcaps and more. Includes Negro, major, minor and Latin leagues. Call today for your free catalogue!



1949 Kansas City Monarchs cap

EBBETS FIELD FLANNELS
1.800.377.9777
http://www.ebbets.com

A tranquil scene shows Aaron Burr's expedition, with canoes full of armed men, on its way, in 1806, purportedly to foment treasonable trouble in lands west of the Mississippi.

authority of the United States."

Marshall found that Marbury clearly had a right to his commission, it having been signed by the President. He had, indeed, been illegally deprived of it by the government. But, Marshall reasoned, in the case at hand the Supreme Court had no power to issue a writ of mandamus, ordering the government to deliver it. Why? Because Section 13 of the Judiciary Act unconstitutionally enlarged the Court's original jurisdiction. The whole of the new nation's laws should depend on the Constitution, so Congress, he reasoned, could not change the jurisdictions and powers of the Court as a matter of political will. Since the power of the Supreme Court to issue a writ of mandamus did not apply, the Court could do nothing for Marbury.

The Republicans at first were delighted. Marshall, after all, had ruled in their favor and Federalist Marbury was out of a job. Moreover, the practical effect of his finding seemed to limit, rather than extend, the Court's power. So the Republicans failed to realize that Marshall's ruling had created a judicial precedent that resounds heavily through our history, especially today. For the first time the Supreme Court had invoked the principle that under the terms of the Constitution it could overturn as unconstitutional a law passed by Congress and signed by a President. It would be 54 years, and long after Marshall's death, before the Supreme Court struck down another law passed by Congress (the Dred Scott Case, argued in 1856-57). The precedent had been set, and in the law precedent counts for almost everything.

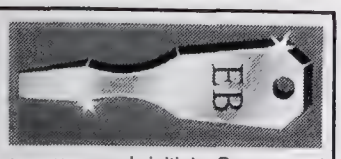
Nowadays, though supporters may grouse when the Court refuses to approve some radical reform that they think would render the country far better, everyone takes it for granted that the Supreme Court has the last word. Instead of challenging that right, each side tries to pack the Court with justices who see things their way. The process of matching laws against the Constitution, known as judicial review, is now standard operating procedure. In 1803 it was a defining moment for the Court. The Constitution nowhere expressly states that the Supreme Court has authority to impose its interpretation on the President or Congress.

If Jefferson failed to see what Marshall's decision would mean in the long run, it may have been because the President was involved in a deal with Napoleon that, in May 1803, resulted in the Louisiana Purchase, the acquisition of more than a fourth

GRANGER COLLECTION

The WIRELESS
SOLAR POWERED
Weather Station from
RainWise Inc.
CALL FOR CATALOG
1-800-762-5723
OR VISIT OUR WEBSITE
www.rainwise.com

NEW AUTHORS
PUBLISH YOUR WORK
ALL SUBJECTS CONSIDERED
Fiction, Biography, Religious, Poetry, Children's.
AUTHORS WORLDWIDE INVITED.
WRITE OR SEND YOUR MANUSCRIPT TO
MINERVA PRESS
2 OLD BROMPTON ROAD, LONDON SW7 3DQ, ENGLAND

LIFETIME POCKET SCREWDRIVER

Handiest gadget ever! Only 2" long, fits on his or her keychain...ready to open lids, fix motors, lawnmowers, etc. 1001 uses! We smartly engrave owner's initials. Guaranteed forever, made of solid gleaming Stainless Steel. Full price $7.50 each. Money back if not delighted. We ship in 2 days. Order by mail direct from: ELGIN ENGRAVING CO., 522 Stevens Ct., Dept. 7, Dundee, Illinois 60118. Phone (847) 426-7179.

FOLK ART & LORE
Looking for a unique holiday gift from around the world?
www.folkartlore.com

European Beret $10
100% Wool • One Size Fits All
Black, Navy, Brown, Red, Camel, Grey
Check or Credit Card w/Exp. Date.
Add $2 Shipping Per Order
John Helmer • Est. 1921 • (503) 223-4976
969 S.W. Broadway, Dept. S118 • Portland, OR 97205

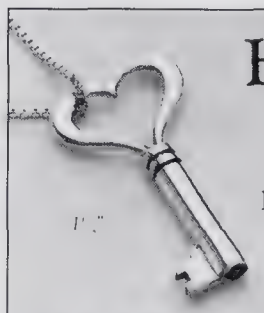
PUZZLE ART
Heirloom quality, intricately handcut wood jigsaw puzzles personalized with silhouettes & messages.
$135 and up
Call or write for free catalog:
(612) 827-5757
Dept. S82, 4255 Garfield Ave.
Minneapolis, MN 55409-1858
http://www.rainylakepuzzles.com
Rainy Lake PUZZLES

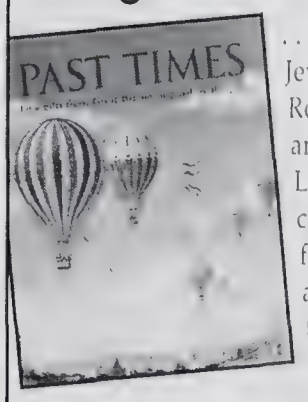
TURKEY
GREECE ISRAEL & JORDAN

Quality tours stressing History, Culture, Folklore, & People. Great food and Photography.
Bora Özkök's
Cultural Folk Tours Int'l
9939 Hibert St., Ste. 207
San Diego, CA 92131-1031
Registration #2011417-40
Call for a free brochure:
http://www.boraozkok.com/
1-800-935-8875
619-566-5951

Twin Studio
CLASSIC HANDBLOWN
14.95
Glass Ornaments
Ball or Icicle
Gift Boxed
248-676-8157

LOOKING FOR LEFTIES
Nature or nurture? Genetic study needs families with **two left-handed** siblings plus one or two right-handed parents. 1-800-244-4201
SABLJ@NCIFCRF.GOV


HEART KEY
A most romantic token from James Breakell's workshop. Finely detailed pendant on 18" chain. Sterling silver $30. 14k Gold $163. Add $4 handling. Catalog available (800) 767-6411.
J.H. Breakell & Co.
132 Spring St., Dept. SMHK, Newport, RI 02840

Fine gifts from Great Britain


. . . INSPIRED BY THE PAST. Jewelry including Celtic, Roman, Medieval, Tudor and Regency designs. Look out for smashing cardigans and scarves, fine porcelain, garden accessories, period furniture accents, fascinating books and memorabilia.
Free Colour Catalog
1-800-621-6020, mention code SM118
PAST TIMES®

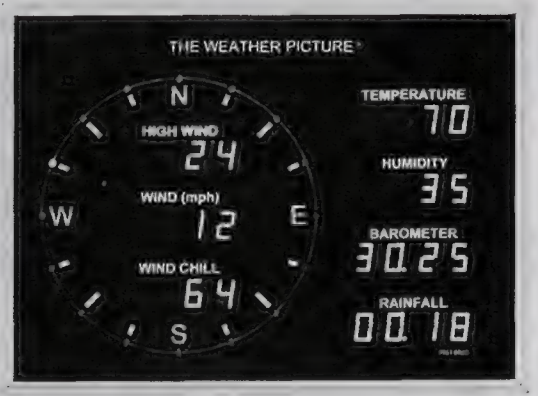
POLAR BEARS
The world's greatest gathering of polar bears occurs each autumn in Churchill, Manitoba. Join our naturalist guides on a Tundra Buggy or in the Tundra Bunkhouse Lodge for an unforgettable journey to see the Great White Bears.
From $1995, Oct. 1999 Departures
TravelWild Expeditions (800) 368-0077
or e-mail: **info@travelwild.com**
www.travelwild.com SM38

of what is now the United States.

In effect the agreement guaranteed peace and almost unlimited expansion and prosperity for the American people, at a bargain-basement price. The only trouble was that Jefferson felt sure that the purchase was unconstitutional. After all, a central tenet of his political philosophy was the idea that the federal government could not do a single thing that was not specifically authorized in the Constitution. Jefferson believed the country consisted of sovereign states that retained their sovereignty even after joining the Republic and ratifying the Constitution. He knew that the clause in the Constitution giving the President, with the consent of the Senate, the right to make treaties (Article 2, Section 2) could be stretched to imply that it was legal to annex 828,000 square miles of territory. But if that was so, then other phrases in the Constitution might be made to imply all sorts of things—as they are today. The Constitution would be turned, the President said, into a blank sheet of paper on which one could write anything one wanted.

If he didn't grab Louisiana, however, his career might be ruined, and his party's future as well, for people were overwhelmingly in favor of it. As many Presidents have done since, he found that principles that had been proclaimed rigid and unchangeable when he was out of power became somewhat more supple when he was actually running the country. He and Congress quietly slipped the constitutional issue under the rug.

Jefferson hoped that the Louisiana precedent would be soon forgotten, but it was not to be. After the War of 1812, Congress had voted to spend $1.5 million federal dollars on "internal improvements"—building roads and digging canals. Jefferson's successor, James Madison, vetoed the bill. "The power to regulate commerce among the several states," he wrote, "cannot include a power to construct



Size shown: 15 ¾" x 11 ¾"

Put the weather on your wall

The Weather Picture™ is an eye-popping new wall unit that continuously displays all the vital weather data you've pre-selected. Big red numerals are easy to read from across the room, day or night.

Available in 2 sizes, in an elegant brushed aluminum or solid teak frame. Teamed with our famous ULTIMETER® Weather Station, The Weather Picture System provides plenty of data to satisfy the most dedicated weather buff.

For complete details, write or call us TOLL-FREE at **1-800-USA-PEET**.

Wireless display now available!

Visit our Web Site to see and *actually try* our Weather Stations:
www.peetbros.com

PEET BROS COMPANY
1308-811S Doris Ave., Ocean, NJ 07712
Our 22nd year ©1998 Peet Bros.

Tektronix®

CHOOSING A COLOR PRINTER HAS JUST BECOME A BLACK & WHITE DECISION.

©1998 Tektronix is a registered trademark of Tektronix, Inc.

Marshall presides at Burr's treason trial in 1807 as prosecutor William Wirt addresses the jury. Burr eventually got off.

roads and canals, and to improve the navigation of water-courses in order to facilitate, improve, and secure such a commerce. . . . To refer the power in question to the clause 'to provide for the common defense and general welfare' would be contrary to the established and consistent rules of interpretation."

Madison's veto was sustained, despite a pointed question put by Senator John C. Calhoun, "On what principle can the purchase of Louisiana be justified?" But—except where slavery was concerned—the tide was beginning to run against "strict construction," and states' rights. People wanted those roads and canals, along with all sorts of other services; and in the long run they were willing to defer to the national government to get them. What was needed, it turned out, was a "broad construction" of the kind that Marshall consistently placed on the text of the Constitution and that allowed the United States to grow into the great commercial-industrial nation it became—rather than the collection of rural communities of which Jefferson dreamed.

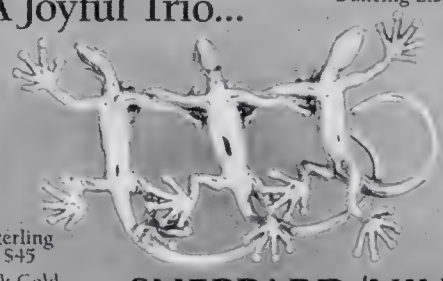
In case after case Marshall kept whittling away at the theory of states' rights. Jefferson could only look on in

Nancy Hammond EDITIONS
Limited Edition Silkscreen Prints
Original, contemporary serigraphs of sailing, herons, flowers and tropical life by artist Nancy Hammond.
Send for catalog ($1.00)
64 State Circle, Annapolis, MD 21401
410-267-6683 Fax 410-267-6994

The Newsletter for People Who Love Paris
To order call toll free:
1-800-677-9660
www.parisnotes.com
PARIS notes
publishing since 1992
current events, culture
history, restaurants
hotels, travel tips
$39 10x/yr

PUZZLES
Elegant and entertaining one-of-a-kind wooden jigsaw puzzles. Each handcut and personalized for you. You'll love our devilish designs and fanciful prints. Limited Editions and corporate puzzles, too. $95 to $3,000.
FREE CATALOG: CALL 802-295-5200
STAVE PUZZLES • Box 329se • Norwich, VT 05055

EXPLORE THE WORLD
Small groups led by naturalists & historians to fascinating and remote areas.
800-628-8747
www.zeco.com
ZEGRAHM EXPEDITIONS

A Joyful Trio...
Dancing Lizards Pin

1" Tall Gift Boxed
Sterling $45
14k Gold $445
Shipping Included
SHEPPARD/HILL
P.O. Box 1209 / Paonia, CO 81428
24 Hrs. 1-800-893-0999 VISA MC
www.sheppardhill.com

Recorded Books™
A Walk In The Woods
narrated by Ron McLarty

• No time to read? Try a Recorded Book!
• Over 2,000 complete & unabridged titles on cassette, narrated by professional actors
• Easy 30 Day Rentals
• Not available in stores—call for a free catalog
Toll Free 1-877-77AUDIO
Ask for Dept. SMSN8
www.recordedbooks.com

horror as the black-robed justice, appointed for life, did his work. In vain, as seats on the Supreme Court became vacant, did Jefferson and his successors appoint good Republicans to the Supreme Court. Under the driving logic of the Chief Justice, the newcomers duly studied the Constitution and ended by regularly voting on the nationalist side.

Jefferson was often overwhelmed by Marshall's powers of intellectual persuasion. "So great is his sophistry you must never give him an affirmative answer," he said, "or you will be forced to grant his conclusion. Why, if he were to ask me if it were daylight or not, I'd reply, 'Sir, I don't know, I can't tell.'" Through all the

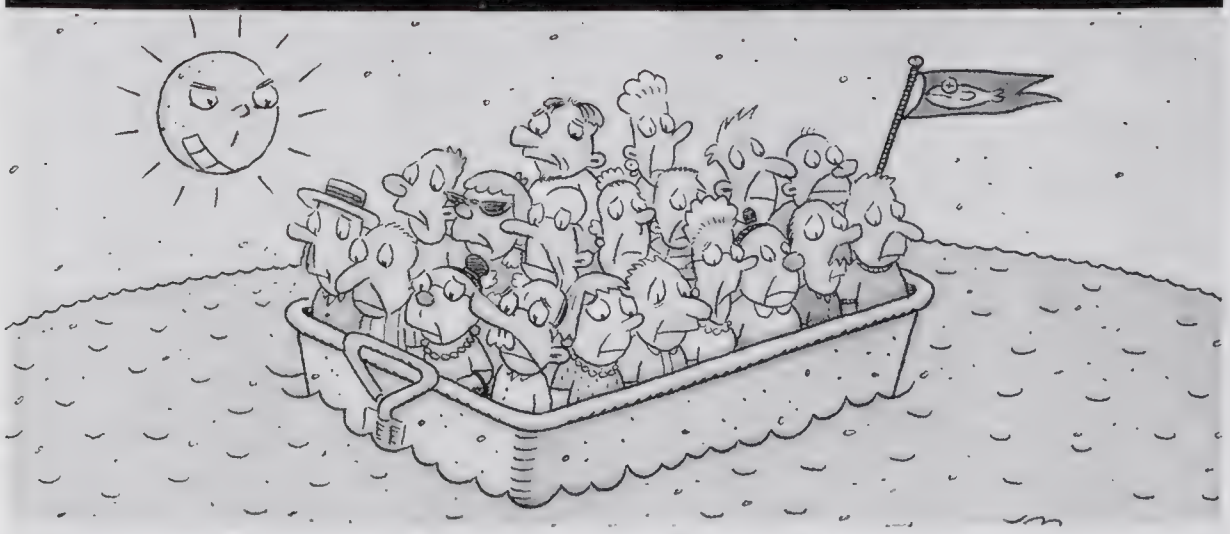
The trial of Aaron Burr, a former Vice President, set Jefferson and Marshall further at odds with each other.

last 20 years of his life, Jefferson saw his party—by then they called themselves Democrats—win all the Presidential elections, till it became for a while the only effective political party. Still, Marshall and his court gained in judicial prestige as they established the judicial branch of the government as the umpire of disputes between the conflicting powers of the state and federal governments.

In 1807, Aaron Burr, who uttered the immortal phrase "Great souls care little for small morals," and who had

GRANGER COLLECTION

Now...cruise the U.S. Gulf, Central America and the Caribbean.



On our luxurious freighter, our passengers don't travel like freight.

Tired of overcrowded mass market cruises? Then come aboard the M/V AMERICANA — a luxury working container ship that has been designed to pamper just 88 passengers.

Spacious, well-appointed suites. Magnificent international gourmet dining. World-class Norwegian service. Voyages leave Houston and sail to Altamira and Veracruz (Mexico), Puerto Limon (Costa Rica), Cartagena (Colombia), Puerto Cabello and La Guaira (Venezuela), Bridgetown (Barbados), San Juan (Puerto Rico) and Rio Haina (Dominican Republic). 22 day round-trip. Shorter-segments are available.

For information, call your travel agent or Ivaran Lines. 201-798-5656

IVARAN Lines Ltd.
Newport Financial Center
111 Pavonia Ave., Jersey City, NJ 07310

Norwegian Registry

3903

Remember how,
when you were a child,
you had your own
secret hiding place?

NORTH CAROLINA

For a free travel guide, call 1-800-VISIT NC, or write VISIT NC, Dept. 571, 301 N. Wilmington St., Raleigh, NC 27601-2825. www.visitnc.com

been Vice President in Jefferson's first term, was picked up on the Mississippi River with nine longboats and 60 adventurers and charged with treason. He claimed he was innocent, but Jefferson was convinced it was part of a plot to threaten the union by creating an independent empire in the Mississippi Valley. When Burr went on trial in Richmond with Justice Marshall presiding as a circuit court judge in Virginia, Burr's defense lawyers asked the court to subpoena certain papers in Jefferson's files.

The President was outraged. Using excuses that are all too familiar today, he refused to hand over the papers, saying they contained state secrets; besides, he argued, a President was not bound to be at the beck and call of a mere judge. Marshall issued the subpoena, a decision that still reverberates in today's newspaper headlines. Though he conceded that as President, Jefferson deserved special treatment because he might have more important things to do, he insisted that under the Constitution the President of the United States is a citizen and not above the law. And thus, like anybody else, obliged to comply with a subpoena. In the end, after threatening to get Marshall thrown off the bench, Jefferson sent the papers—saving what face he could by not formally answering the subpoena.

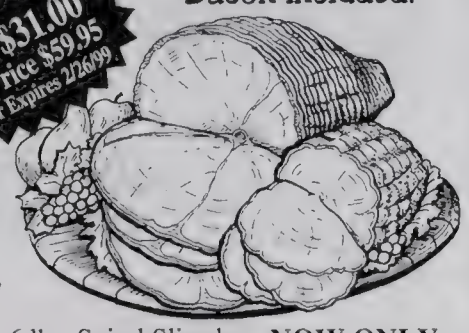
The jury ultimately handed in a verdict of "Not Guilty." But throughout the proceedings, Jefferson raged against Marshall, writing that the case proved the "error in our Constitution, which makes any branch independent of the nation," and that only the "tricks of the judges" had stood between Burr and the gallows. Marshall, for his part, remained impassive, saying the "court feels no inclination to comment."

Case after case followed, most of them routine, but some inaugurating changes in the very nature of the country. In all of them Marshall followed two fundamental principles.

Give a SPIRAL SLICED Sweet Sugar Cured
HAM & TURKEY BREAST

FREE 1lb. pkg. of Hickory Smoked Bacon included!

Save $31.00 Reg. Price $59.95 Offer Expires 2/26/99



ITEM: K30217

HAM 4-6 lbs. Spiral Sliced
TURKEY 2-3 lbs. Unsliced
NOW ONLY $28.40
Plus $8.95 SHIPPING

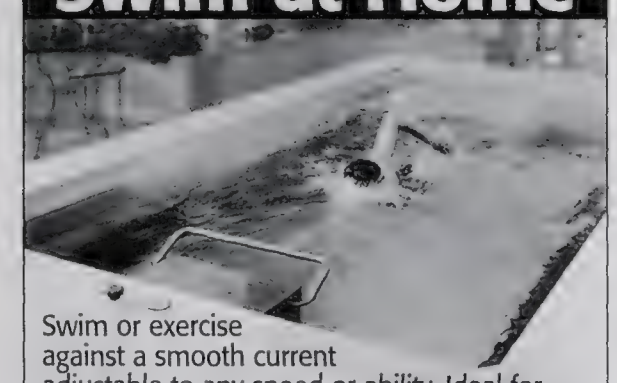
Give a Special Taste Treat! Sugar and spice glaze, lean, closely trimmed, moist cured, hickory smoked, and slowly cooked by our 24-hour method--it's the most succulent ham and tastiest turkey breast you'll ever eat. Apply the enclosed glaze to the ham and turkey, put in the oven and wait for a mouth-watering aroma to fill the air. **FREE 1 lb. hickory smoked bacon with each order.** All items prepared for you right on the Burgers' family farm. This is an introductory offer for new customers only. Limited to 2. Expires 2/26/99. Satisfaction guaranteed.

Call 1-800-624-5426 *or send to*
BURGERS' SMOKEHOUSE
32819 Hwy 87 • California, MO 65018

MARK EHRMANN

THE Wrap
"Leaf & Cubic Zirconia"
$32.50/pair - Sterling
$39.50/pair - 14K Gold Vermeil
800.537.2902
FAX 707.824.8067
www.markehrmann.com
visa & mastercard only

Swim at Home™



Swim or exercise against a smooth current adjustable to any speed or ability. Ideal for swimming, water aerobics, rehabilitation and fun. The 8' x 15' Endless Pool® is simple to maintain, economical to run, and easy to install inside or outdoors.

FOR FREE VIDEO CALL
(800)233-0741, Ext. 339
or visit www.endlesspools.com
200 E Dutton Mill Rd, Dept 272
Aston, PA 19014
ENDLESS POOLS™

GALÁPAGOS
You, eleven other adventurers and our licensed naturalist will explore more islands by yacht than any other Galápagos expedition. 60 trip dates. Machu Picchu and Peru options. Free video and brochure.
INCA *(Inca Floats, Inc.)*
1311-S 63rd Street, Emeryville, CA 94608
510-420-1550 incafloats@aol.com

COPPER CANYON
Costa Rica and More
Explore Mexico's Copper Canyon and Costa Rica on our deluxe escorted and custom adventures. For free newsletter:
1-800-926-1140
www.calnative.com
The California Native, 6701 W. 87 Pl, Los Angeles, CA 90045

Ceiba Tree© Jewelry
MAYA GLYPHS

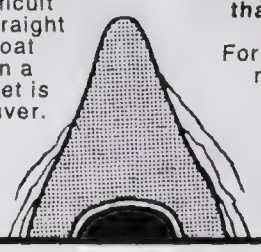
Handmade by Collette Fortin.
2" Sterling Silver pin with hacha head glyph $85 + S&H.
Personal dates & relationships.
14k Gold available.
CFJewel@bigfoot.com
Free brochure: **1-800-484-3116.** enter code **1621**
118 Gull Dip Rd., Ridge, NY 11961 VISA/MC

THE POKE BOAT®
IT'S EVERYTHING A CANOE ISN'T.

A canoe is tippy. A Poke Boat isn't. It's remarkably stable.

A canoe is hard to turn and difficult to keep in a straight line. A Poke Boat isn't. It stays in a straight line, yet is easy to maneuver.

A canoe is heavy. A Poke Boat isn't.



It **weighs only 22 pounds** - built with aircraft strength.

You can buy more than a canoe.

For more information, give us a call.

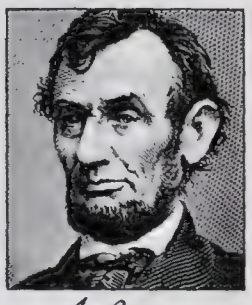
606-986-2336.

OWN A PIECE OF HISTORY

We deal in original letters and documents written by famous people. Americans, World Leaders, Scientists, Authors, Artists, Composers and many more.

Call toll-free or send $2 for our catalogue today.

Please include phone number and individuals of interest.



American Historical Guild
17 Firelight, Suite 100
Dix Hills, NY 11746
(516) 493-0303 • 800-544-1947

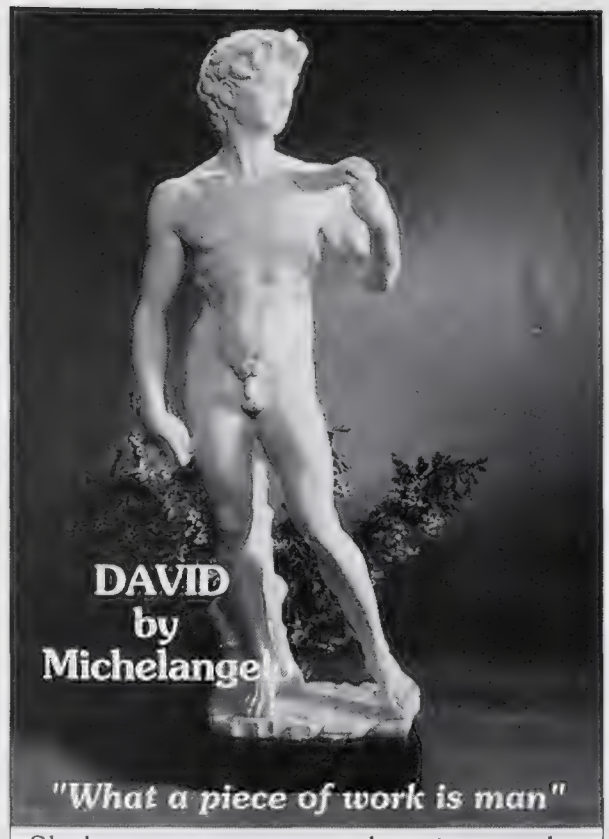
The first was that it was up to the courts to protect the rights of the individual in the face of the massed powers of government, notably the right to keep and enjoy one's own property. The three crucial rights were to life, liberty and property, according to John Locke, who influenced the makers of the Constitution, the other two being guaranteed by the right not to have property taken by the state—except, as the Fifth Amendment allows, under certain limited circumstances and with due recompense. Marshall's second principle involved establishing the extent of federal authority over the states.

In 1810 Marshall received the case of

Still Chief Justice in 1829, Marshall swears in President Andrew Jackson.

GRANGER COLLECTION

Fletcher v. Peck, involving litigation that had been dragging on for 15 years about the Yazoo lands—a plot of some 35 million acres, including most of Alabama and Mississippi. The land had been sold by the legislature of Georgia to a syndicate of speculators for $500,000, a price of 1 ½ cents per acre. When it was later learned that all but one of the legislators had profited financially from the deal, angry voters threw them all out and elected new ones. The new legislature repealed the act authorizing the sale and ordered the original copy of it burned in a public square. In the meantime, hundreds of more or less innocent



Shakespeare expressed it in words, Michelangelo in marble. The original is 16½ ft. high, probably not right for your living room. Choose the appropriate size. Reproduced in bonded marble. 12" $134; 19½" $247; 25½" (pictured) $607; 37" $1234. (Bases attached, shipping included.) Also—48" $3206; 64" $5962. (Bases available, shipping not included.) Unconditional guarantee. Check, VISA, MC. **128 page artbook color catalogue $6.**

ELEGANZA LTD. *Importers of Fine Statuary*
3217 W. Smith #6311, Seattle, WA 98199
206/283-0609 • www.eleganza.com

Small Ships

Fourteen of the world's finest small ships, offering the discerning traveler more than 30 unique adventures all over the globe.

Request your catalog today,
1-800-964-0500,
or see your travel agent.

INTRAV
Exploring the World Since 1959

Raising your quality of life by an extra hour a week.

We're proud to sponsor NOVA on PBS.
Check your local listings for times.

NOVA SEE IT ON PBS

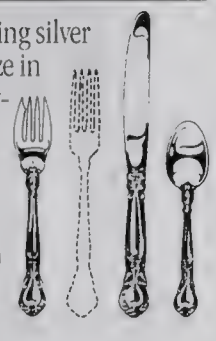
Northwestern Mutual Life®
The Quiet Company®

Northwestern Mutual Life Foundation © 1998 The Northwestern Mutual Life Insurance Co., Milwaukee, WI • www.northwesternmutual.com

MISSING A PIECE OF YOUR PATTERN?®

Replace pieces or add to your sterling silver at up to 75% off retail. We specialize in new and used flatware and hollowware. Over 1,200 patterns in stock. Call or write for a free inventory of your sterling pattern. *(We buy sterling silver, with a careful appraisal for maximum value.)*

Pattern shown: Chantilly by Gorham.



Beverly Bremer
SILVER SHOP
3164 Peachtree Rd., NE, Dept. SM, Atlanta, GA 30305 / Mon.-Sat. 10-5
404 261-4009

Goose down robe

Surround yourself in warm, light-weight elegance. Supersoft easy care cotton fabric. Contrasting piping, shawl collar and roll back cuffs. Fully guaranteed. Order cream, peach, bluette, coral, navy, burgundy or teal. Sizes XS, S, M, L. Regularly $160. **Sale $89.** Shipping and handling, $6.95.

Goose Down Slippers match robes in cream, peach, bluette, coral, navy, burgundy or teal.
XS, S, M, L. Regularly $38. **Sale $22.** Shipping $4.95.

- ❑ Order by phone with MC or VISA, call 415/472-2154.
- ❑ Use MC, VISA or check for mail orders.

CA residents add 7.25% tax

WARM THINGS
180 Paul Dr., Dept. SO/San Rafael, CA. 94903
415/472-2154 • Ship within 48 Hrs. • MC/VISA

private individuals had bought pieces of the land, and wanted their money back. The Supreme Court decided that the motives of the legislators who had voted the original act were irrelevant. The State of Georgia had made a valid contract with the purchasers, and could not declare ownership of property null and void.

Eventually Congress voted $5 million to pay off the Yazoo claimants and bought the land itself, incidentally making a handsome profit for the federal government. Marshall had established once and for all that when a state makes a contract, it is required, like anyone else, to keep it.

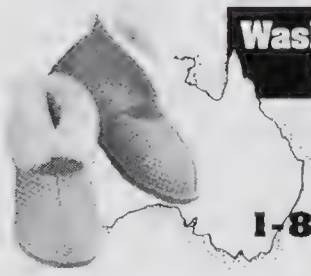
In 1819 he took up another epoch-making case, *Dartmouth College v. Woodward*. The college had been privately owned by a self-perpetuating board of trustees under a charter incorporated in 1769 by the British crown. In 1816, a political squabble caused the state legislature to, in effect, take over the college from its trustees. With Daniel Webster as their attorney, the trustees sued and Marshall agreed with them. The original charter, he held, was a contract, and under Article 1, Section 10 of the Constitution, no state had the right to pass any "law impairing the Obligation of Contracts."

The state had no more right to break its contract with a corporation than with an individual; a corporation, in fact, must be seen legally as something like an immortal individual. This decision had the long-range effect of keeping corporations safe from capricious interference by legislators. Corporations were still a relatively new and untested form of social organization. By the end of the 18th century, American states had issued charters for only 310 corporations, and only 8 of them were for commercial purposes (the rest having religious, educational or political aims). After the *Dartmouth College* decision, the number of corporations would rise exponentially till, by the

Rome Florence Venice
Tuscany Umbria Sicily
Amalfi Coast Lake District
CARAVELLA ITALIA

Escorted tours of Italy in small groups.

Call Toll-Free: **888-665-2112** www.seeitaly.com



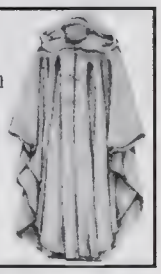
Washable Sheepskin Slippers & Boots

Write or Call:
Aussie Connection
135 NE Third Avenue
Hillsboro, OR 97124
1-800-950-2668
for a FREE Catalog

Armchair General®
COLLECTABLE TOYS
Unique selections of new and old toy soldiers, cars, trains, airplanes, books, etc., from around the world.
COLOR CATALOG — 1-800-365-2498
ARMCHAIR GENERAL® LTD., DEPT. A
884 Woods Mill Road, Suite 201, St. Louis, MO 63011
Visit us at www.armchairgeneral.com

ARCTIC ODYSSEYS™
To the **NORTH POLE**, Canada's Baffin & Ellesmere Islands, Greenland, Russia, Siberia & China with **SPECIALISTS.** Cultural, Wildlife, Dog Sled, Reindeer, Fishing, Birding, & Skiing **Adventures.**
Also, Arctic MILLENNIUM X Two (Kamchatka & Alaska)
(800) 574-3021 / FAX (206) 726-8488
www.arcticodysseys.com

WOOL CAPES
100% Merino Wool. People love the warmth and the romance of our capes.
Catalog & Free Swatches. Plus: *Hats, Shawls, Blankets & other Fine Woolens.*
1-800-788-9842
Casco Bay Wool Works, 34 Danforth St, Box 25SM, Portland, ME 04101



COPPER CANYON
SIERRA MADRE RAIL EXCURSIONS
Deeper than the Grand Canyon; cliff-dwelling Tarahumara Indians; mountain lodges in pine forests & historic hacienda hotels in tropical colonial towns. Customized daily departures.
OPEN MON-FRI 9 AM - 6 PM CT **1-800-843-1060**
COLUMBUS TRAVEL, 900 RIDGE CREEK, BULVERDE, TX 78163

PERSONALIZED CARTOUCHE JEWELRY

HANDMADE IN EGYPT
Translate Anything into Ancient Egyptian Hieroglyphics
18k Gold and Silver Pendants, Rings and Bracelets
Call us for a free brochure and more information
Discoveries Egyptian Imports
2910 Business Center Dr. · Dept SM · Alexandria, Va. 22314
or visit our website at:
"Love" http://www.egyptianimports.com
1-800-237-3358
Celebrating our 18th year!
DISCOVERIES EGYPTIAN IMPORTS

adventure ALASKA
truly unique 5 - 17 day small group journeys
• River Adventures • Combination Trips
• Sightseeing Tours • Wilderness Explorations
• Dog Sledding Trips • Natural History/Cultural Tours
(800) 365-7057 P.O. Box 64 Hope, AK 99605 www.AdvenAlaska.com

Learn a foreign language on your own!
Audio-cassette/book courses in French, German, Spanish, Arabic, Hebrew, Chinese, Czech, Japanese, and 90 other languages. Comprehensive. Used by U.S. State Department. Call or write for free catalog. 1-888-773-2548.
AUDIO-FORUM® Room 4407, Broad St. Guilford, CT 06437

Cast Bronze Bells
Decorative Satin Polished
Maple Leaf, Ivy
Snowflake
Buffalo
Use Indoors or Outdoors
5" high x 4" dia. (1½ lbs.) • $85 ppd ground
THE BRONZE BELLCASTER
P.O. Box 93 • Cross Plains, WI 53528
Call for Brochure 800 831-5631

BrightenUP
Free boutique catalog of Mica, Mission, Prairie and Tiffany style lamps and fixtures for your home and office. Prices and service that will brighten your smile.
(Lamp shown: Harvest by Dale Tiffany)
The Bright Spot, Inc.
Phone 800-736-0126 • Fax 800-736-1329
email: service@thebrightspot.com

World's Largest Inventory
Discontinued & Active China, Crystal, Flatware & Collectibles
• 100,000 Patterns
• 5 Million Pieces
• Buy & Sell
Call for FREE lists.
REPLACEMENTS, LTD®
1089 Knox Road, Greensboro, NC 27420 Dept. SM
1-800-REPLACE (1-800-737-5223)
www.replacements.com

PACIFIC AIRCRAFT
THE COLLECTOR'S CHOICE
Makers of Fine Aerosculptures
Hand carved from solid mahogany.
Exquisitely hand painted markings and details.
• Museum quality
• Sizes 16" to 22"
• Stand included
• From $99.50 • Over 250 Models
Satisfaction Guaranteed
CALL (800) 950-9944 FOR CATALOG AND ORDERS
14255 N 79th Street, Scottsdale, AZ 85260
Phone (602) 991-1841 • http://www.warplanes.com

end of the 19th century, they dominated the American economy.

In the same year, Marshall wrote the unanimous decision *McCulloch v. Maryland*, which has been described as the most important case in the history of the Supreme Court because it definitively established the priority of federal law over state law. It involved the Second Bank of the United States, which was chartered by Congress in 1816, and served as the repository for the public funds. But it was basically a private institution that competed with banks chartered by the various states. Banks in the state of Maryland did not appreciate the competition, and so Maryland decided to levy a heavy stamp tax on all banks "not chartered by the legislature," meaning the Second Bank of the United States.

Gibbons v. Ogden was once described as the "emancipation proclamation of American Commerce."

Maryland argued that the federal government was created by the states, and that state law took precedence over federal law in every matter, such as banking, not specifically cited in the Constitution. Marshall, on the other hand, determined that the Constitution was not made by the states but by the people ("We, the people of the United States, . . . do ordain and establish. . . ."). Any act of the federal government not directly contrary to the Constitution therefore was the law of the land, whatever a state, or the Supreme Court, might think of its merits. Coining the famous phrase, "The power to tax involves the power to destroy," Marshall declared that the Maryland tax on a bank established by the U.S. Government was void.

In 1824, he struck another devastating blow to states' rights.

Europe River Cruises

Discover an enchanting Europe from her legendary rivers, away from crowded highways. Visit charming medieval towns and quaint villages and watch a fairy-tale world of castles, vineyards and spectacular scenery float by. Uniworld offers cruises on all major European rivers on **privately chartered ships (the best in Europe) with only English speaking passengers and all shore excursions included.** Cruise through Portugal, Italy, France, Dutch Waterways, Eastern Germany and on the great Rhine, Main and Danube rivers. Choose from over 100 all-inclusive, one-unpacking European cruise holidays, 9 to 23 days, from only $1798 incl. airfare.
Ask for our 84-page brochure.

Russia Cruises

Experience the grandeur of Russia from the comfort of a privately chartered cruise ship. Explore Moscow and St. Petersburg and cruise the "Waterways of the Czars" (the great rivers and lakes which connect these two fascinating cities) to splendid medieval towns and charming villages, past breathtaking scenery. Sail on **the best ships in Russia, privately chartered, with western management, with only English speaking passengers and all shore excursions included.** Great all-inclusive, one-unpacking 14-day cruise holidays from only $2598 incl. airfare.
Ask for our 32-page brochure.

UNIWORLD
AMERICA'S LEADER IN RIVER CRUISING
(800) 856-9688

www.dallaspridgenjewelry.com
DALLAS PRIDGEN JEWELRY
One at a time, by hand
"On Parade" Bracelet, 11 links
14K Gold $595, Sterling $165. V/MC/Amex
Unconditionally Guaranteed. 1-800-477-1856
PO Box 147, Chapel Hill, NC 27514

Clip & Mail

ORCHIDS
The Ultimate in House Plants!

Grow and enjoy orchids, the most beautiful flowers in the world, in your own home. We'll show you how. Receive a different plant each month, with instructions for care. Buy one plant or many. For free brochure :

The Orchid Club
Box 40, Dept. SM-4 Waianae, HI 96792
TOLL FREE 1-800-822-9411

Name _____
Address _____
City/State/Zip _____

MARITIME BRITAIN CRUISE
Explore coastlines, remote villages and spectacular wildlife sanctuaries in England, Ireland, Scotland & Wales — on the comfortable expedition vessel *Explorer*.
May 29-June 9, 1999 From $2995
Save $400 if you sign up by 11/30/98
TravelWild Expeditions (800) 368-0077
or e-mail: info@travelwild.com
www.travelwild.com SM37

AUDUBON

Specializing in the finest original natural history art from the 17th to 19th centuries. Featuring works by Audubon, Gould, Besler & many others. Call or write for our brochure.

KENYON OPPENHEIMER, INC.
Wrigley Building, 410 N. Michigan Ave.
Chicago, IL 60611
312-642-5300 *Est. 1969*

It was in the case of *Gibbons v. Ogden*, in a decision once described as the "emancipation proclamation of American commerce," that Marshall's decision nullified a law by which the State of New York granted a monopoly on the use of its waters to the line of steamboats belonging to Robert Fulton and his partner, Robert Livingston. The law had been used to restrain competition by barring a rival line owned by Thomas Gibbons from making the crossing between New Jersey and New York City. This, Marshall held, was in flagrant violation of the constitutional provision giving Congress the power to "regulate Commerce . . . among the several States." All of the now immense regulatory apparatus of the modern American government had its inception in this judgment.

The effect of all such cases was to prevent the states from ever erecting economic walls around their borders. That America moved so rapidly from an overwhelmingly agricultural society to the highly urbanized industrialized and mobile one it would become is in good part owing to the way the Marshall court cleared away efforts to put obstacles in the way of the free flow of trade and people across state boundaries. No wonder Marshall has been described as a definer of the nation.

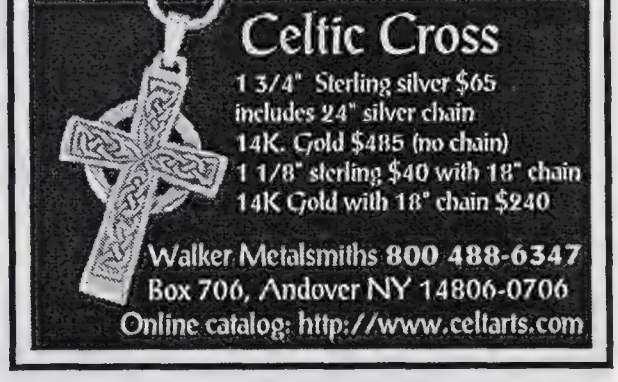
There were things that Marshall could not do. Judicial conservative though he was, he held views in advance of his time, believing in the equality of women and detesting slavery. But as a judge bound by the laws of the land, there was not much he could do about either, though in 1829 in *Boyce v. Anderson* he ruled that "a slave has volition, and has feelings.... He cannot be stowed away as a common package. In the nature of things, and in his character, he resembles a passenger, not a package of goods."

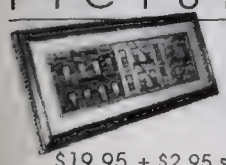
He was also indignant about the fate of the Indian nations being dispossessed of their land to make room

EUROPEAN GARDEN TOURS
First Class, Escorted Garden Tours to Public and Private Gardens Worldwide
China • Costa Rica • France • Holland
England & The Chelsea Flower Show
New Zealand • Ireland • Scotland • Italy
Call **EXPO GARDEN TOURS** for a free brochure **(800) 448-2685**

Visit us on the World Wide Web
World of Science
www.worldofscience.com
Unique fossils, meteorites, minerals, and exciting cutting edge science and nature products

100% Cotton Knit SLEEP CAP
Holds in up to 40% of body heat the head can lose! Special knit "gives" naturally to fit *any* head (man's or woman's); never constricts or binds . . . caresses your scalp with gentle warmth! Choose snow white or soft blue.
Only $6.95 – 3 for $14.85 (Save $6)
Postpaid if you order promptly!
WITTMANN TEXTILES Dept. 156
Hobe Sound, FL 33475 (Ship. to FLA add tax)


Celtic Cross
1 3/4" Sterling silver $65
includes 24" silver chain
14K. Gold $485 (no chain)
1 1/8" sterling $40 with 18" chain
14K Gold with 18" chain $240
Walker Metalsmiths 800 488-6347
Box 706, Andover NY 14806-0706
Online catalog: http://www.celtarts.com

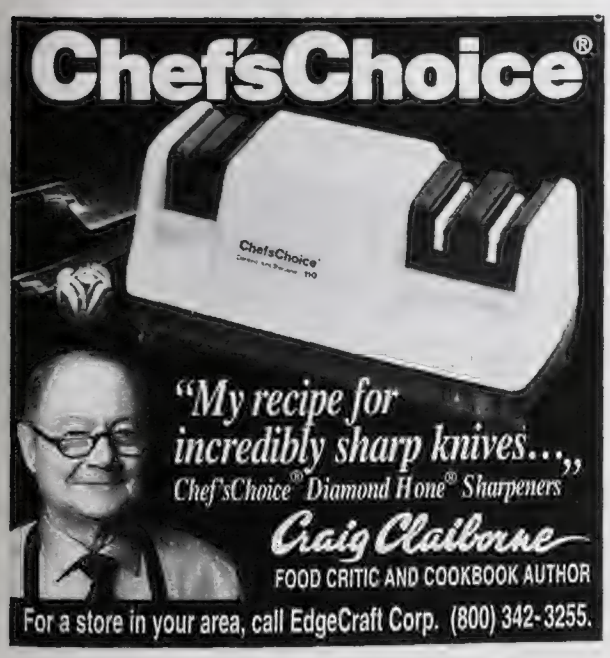
PANORAMIC
PICTURE FRAMES

The widest selection of quality panoramic frames anywhere. Call or e-mail for free catalog
dharpohall@aol.com
$19.95 + $2.95 s/h 1•888•277•9400

GOLFER'S LUCKY STYMIE MARKER
Lucky is the golfer who has this lucky four-leaf clover (instead of a coin) to mark his place on the green. Solid brass, a lifetime gift. Any name expertly engraved. Full price $5 each. Money back if not delighted. We ship in 2 days. Order by mail direct from: ELGIN ENGRAVING CO., 522 Stevens Ct., Dept. 7, Dundee, Illinois 60118. Phone (847) 426-7179.

Patagonia
Distinctive Journeys to Asia, Africa, the Americas, Europe, & Antarctica
GEOGRAPHIC EXPEDITIONS℠
(800) 777-8183
www.geoex.com CST#1006401-10

COUNTRY WALKERS
20 Years of excellence in Worldwide Walking Vacations
• Europe, Africa, North & South America and the South Pacific
Free catalog call 800-638-0291
www.countrywalkers.com

Cartouche
Capture the Power of the Ancients with this Magical good luck Talisman.
Your Name in Heiroglyphics.
18K Solid Gold & Sterling Silver.
•Protective Charms •Powerful Amulets
•Beautiful Gifts •Flower of Life
Catalog of Unique Imported Handmade Egyptian Jewelry & Gifts
For a Free Catalog Call
1-800-283-4978
P.O. Box 309-SM, Delmont, PA 15626
E-mail: sm@cartoucheltd.com

Chef'sChoice®


"My recipe for incredibly sharp knives...,,
Chef'sChoice® Diamond Hone® Sharpeners
Craig Claiborne
FOOD CRITIC AND COOKBOOK AUTHOR
For a store in your area, call EdgeCraft Corp. (800) 342-3255.

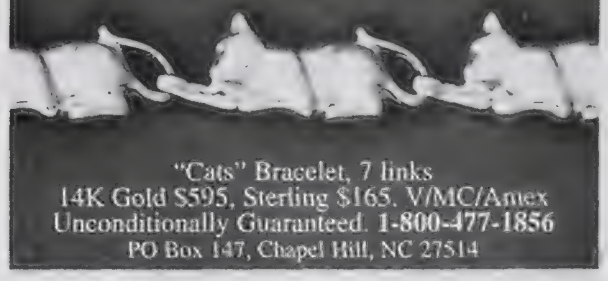
for the westward movement. The Cherokees in Georgia had done their best to adjust to the new way of life by abandoning hunting for agriculture and writing a constitution for themselves based on that of the United States. The State of Georgia was nevertheless determined to get rid of them. Marshall was powerless to intervene, but he struck a blow in 1832 in *Worcester v. Georgia* when he declared the Georgia statutes relative to the Indians "repugnant to the Constitution, laws, and treaties of the United States." He ordered the release of Samuel Worcester and Elihu Butler, missionaries who had been arrested and detained for interfering with Georgia's Indian policies.

The State of Georgia ignored the order, and President Andrew Jackson is reported to have said, "Well, John Marshall has made his decision, now let him enforce it." The Cherokees lost all their land and had to embark on their long, tragic march a thousand miles to the west.

Jefferson died on July 4, 1826, on the 50th anniversary of the adoption of the Declaration of Independence he had mostly written. In Philadelphia, the great Liberty Bell tolled to mark his passing. Marshall died in Philadelphia two days after the Fourth of July, nine years later, and to mourn his passing they rang the Liberty Bell yet again.

The two men died unreconciled, each fearful of his country's future. Jefferson saw his beloved union of self-reliant states being pressed "at last into one consolidated mass" by the decisions of the Marshall court. Marshall glumly watched the electoral triumphs of the states' rights candidates while yielding "slowly and reluctantly to the conviction that the Constitution cannot last. The Union," he said, "has been prolonged thus far by miracles. I fear they cannot continue."

In his 74 articles for SMITHSONIAN, *on everything from goats to the Spanish Civil War, the author has exercised a lot of judicial restraint.*

www.dallaspridgenjewelry.com
DALLAS PRIDGEN JEWELRY
One at a time, by hand

"Cats" Bracelet, 7 links
14K Gold $595, Sterling $165. V/MC/Amex
Unconditionally Guaranteed. 1-800-477-1856
PO Box 147, Chapel Hill, NC 27514

CELTIC CROSS

From our extensive Celtic jewelry collection, a pendant simply executed in silver or gold. Shown full size.
No. 2270 Celtic Cross
Sterling silver $38.00
(24" sterling chain)
14 kt. gold $300.00
(chain not included)
Add $5.00 for handling.
Check, M/C, Visa or Amex.
Send for our unique catalog.
Telephone **1-800-324-4934**
9a.m.–5p.m. Pacific Time Mon–Sat
Shop through our on-line catalog at:
http://www.davidmorgan.com/
David Morgan
11812 North Creek Pkwy. N., Suite 103, Bothell, WA 98011

twenty-four hours • seven days • millions of years

METEORITES
MINERALS
FOSSILS &
DINOSAURS
You can now acquire the finest in museum quality natural history specimens without leaving your home. Presented on the internet by a distinguished international auction house, many of these spectacular finds are offered without reserves. An auction is in progress right now. Visit our web site to view the current selections.
P.O. Drawer J, Ithaca, New York 14851 USA
Email: Director@NaturalHistoryAuction.com
Phone: (607) 257-5349 Fax: (607) 266-7904
www.NaturalHistoryAuction.com
NEW YORK • LONDON • SAN DIEGO

The Current Way to Exercise
Walk, run, swim or exercise in the same adjustable Current Pool used by over 500 hospitals and 26 professional sports teams. Superior composite construction. Easy installation and maintenance. Units begin at $22,950.

SwimEx®
www.swimex.com
Call 800-877-7946 for brochure & video

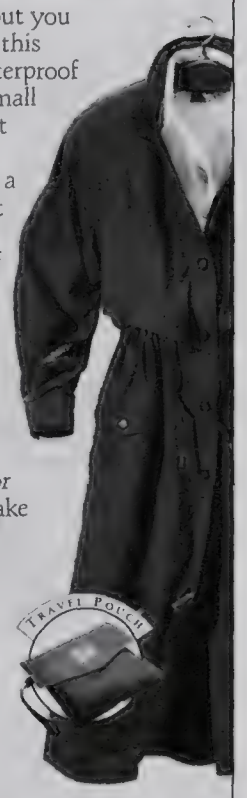
AFRICA ◆ CHINA ◆ INDIA ◆ JAPAN ◆ NEPAL ◆ SRI LANKA ◆ TAIWAN
Since 1989
UPTON TEA IMPORTS
Purveyor of the World's Finest Teas
1-800-234-8327
www.uptontea.com
Free catalog listing over **220** varieties of garden-fresh, loose tea
231 South St. * Hopkinton, MA 01748

MittelEuropa Designs, Inc.
Czech Art Glass
Traditional and Contemporary
Call for a free catalog
1•888•3•PRAGUE
www.ARTCRYSTAL.com

www.mountainlight.com
Galen Rowell
photographic prints, stock, books
510-601-9000

LONDON FLATS
Short Term - Privately owned
COTSWOLD COTTAGES
THE LONDON CONNECTION
MR. THOMAS MOORE III
TOLL FREE PHONE: 888-393-9120
FAX: 801-393-3024
E:MAIL london@relia.net

TravelSmith's Packable Microfiber Raincoat



Hard to believe but you can actually fold this stylish 100% waterproof raincoat into a small pouch and tuck it in your carry-on. We make it from a unique suede-soft microfiber that's totally rain-proof and seam sealed. It's just one of over 350 helpful products in our new catalog of uncommon travel gear. The catalog is filled with versatile, wrinkle-free, lightweight, easy-to-pack, travel clothes, many of which can *double for daytime sightseeing or* a night on the town. We also make Classic Travel Blazers, Coolmax* T-Shirts, rugged, ultra-organized luggage, and The Indispensable Black Travel Dress™. Call now for your **FREE CATALOG** and **FREE OUTFITTING GUIDE** with suggested packing lists and good, solid advice for the trip you're planning!

Women's, in *Olive* or *Black.*
Regular and Petite sizes XS-XL. **$199** #5074
Men's, (Not shown). In *Taupe* or *Black.*
Regular sizes S-XXL. M-XXL also available in Long **$159** #7375

Same Day Shipping • 100% Guarantee • Open 24 Hours

TRAVELSMITH*
60 LEVERONI CT • NOVATO, CA 94949 • WWW.TRAVELSMITH.COM
800.950.1600 DEPT SM16846

ADDITIONAL SOURCES

The Object at Hand [p. 36]

A History of Presidential Elections, Vol. IV: 1872-1888, edited by Arthur M. Schlesinger, Jr., Chelsea House, 1985

The Politicos: 1865-1896 by Matthew Josephson, Harcourt, Brace & World, 1938

Grover Cleveland: A Study in Courage by Allan Nevins, Dodd, Mead, 1964

First Ladies: The Saga of Presidents' Wives and Their Power, 1789-1961 by Carl S. Anthony, William Morrow, 1992

Highlights [p. 40]

Chuck Close (exhibition catalogue) by Robert Storr, Museum of Modern Art (New York), 1998

Chuck Close: Life and Work by John Guare, Thames and Hudson (New York), 1995

Dam Removal [p. 48]

"Dams and Rivers" by Michael Collier, Robert Webb and John Schmidt, *U.S. Geological Survey Circular 1126,* Tucson, Arizona, June 1996

"The Trouble with Dams" by Robert Devine, *Atlantic Monthly,* August 1995

Silenced Rivers by Patrick McCully, Zed Books (London), 1996

Sargasso Sea [p. 82]

The Sargasso Sea by John and Mildred Teal, Little, Brown, 1975

"The Sargasso Sea" by John H. Ryther, *Scientific American,* January 1956

Jackson Pollock [p. 96]

Jackson Pollock (exhibition catalogue) by Kirk Varnedoe, with Pepe Karmel, Harry N. Abrams, 1998

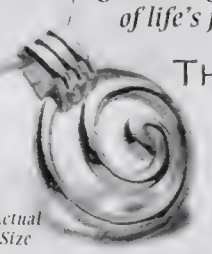
Jackson Pollock: An American Saga by Steven Naifeh and Gregory White Smith, Clarkson N. Potter (New York), 1989

Jackson Pollock: A Biography by Deborah Solomon, Simon and Schuster, 1987

SKULLDUGGERY
Quality Fossil Replicas
(800) 336-7745
FREE Catalog
Skullduggery
624 South B St • Dept Sf8
Tustin, CA 92780
http://skullduggery.com

PERSONALIZED
CARTOUCHE JEWELRY
Your name translated into Egyptian hieroglyphics.
HANDMADE IN EGYPT
18K Gold from $150
Sterling Silver $40 • S/H $4.00
TO ORDER CALL,
1 (800) 447-2504
VISA • MC • AMEX
FREE BROCHURE
LITTLE EGYPT IMPORTS
P.O. Box 32977
Spells "Mary" Kansas City MO 64171 Spells "Lisa"

CELEBRATE THE CIRCLE OF LIFE
This original design embodies the continuum of life's joys and journeys.



THE ESSENTIA SPIRAL
18" Sterling Necklace $38.00
Also available in 14K gold
$4 shipping ~ Visa • MC • AmEx
Color catalog upon request
WWW.JANEFENESTRA.COM
1-888-252-7652
JANE FENESTRA JEWELRY SINCE 1988
2200 Wilkerson Road ~ Bloomfield, KY 40008

Moving?

If you are moving soon, please send an address label fom a recent issue along with your new address to:

Smithsonian Membership
Data Center
P.O. Box 420312
Palm Coast, FL 32142-0312
or call:
1-800-766-2149

Allow 6 weeks advance notice

SCULPTURE along the TRINITY

Juried International Sculpture Show & Sale
Benefiting Participating Libraries
Sculptureworks, Inc. • P.O. Box 331084 * Fort Worth, Texas 76163
Sculpture Along The Trinity is a production of Sculptureworks, Inc. a nonprofit 501(c)(3) corporation

BUFFALO RANCHING makes good ecological sense for the American prairie. Please write or call for free catalog of a full range of buffalo products to:
Thundering Herd Buffalo Products
PO Box 1051, Dept.SM11
Reno, NV 89504
1-800-525-9730

Costa Rica · Belize · Africa · Galapagos
NATURAL HISTORY TRIPS WORLDWIDE SINCE 1982
P.O. Box 3656-N15
SONORA, CA 95370
GEO EXPEDITIONS
Fulfill Your Dreams of Adventure
CST 2007541-40
800 351-5041

The World's **Classical Recordings Newspaper**
FREE Sample
Recommendations, News, Discounts...
www.hbdirect.com 1/800/222-6872
H&B, P.O. Box 309, Waterbury Center, VT 05677

Fede and Claddagh Rings
from the world renowned Stavenhagen Collection™ of ancient rings.
The most beautiful symbols of friendship, loyalty and love ever to grace the human hand. Licensed reproductions of 17th and 18th Century rings. 18kt gold $199.95 or sterling silver $34.95.
Call for free full color brochure describing all 5 rings of the *Hands of Humanity™* ring collection or to place an order. **1.877.234.2000**
Or e-mail: dandw@erols.com. Specify ring size.
Dahne & Weinstein 10805 Falls Road Lutherville, MD 21093

SMITHSONIAN (ISSN 0037-7333) is published monthly by the Smithsonian Associates, 900 Jefferson Drive, Washington, DC 20560. © Smithsonian Institution 1998. All rights reserved. Reproduction in whole or in part without permission is prohibited. Editorial offices are at 900 Jefferson Drive, SW, Washington, DC 20560 (202-786-2900). Advertising and circulation offices are at 420 Lexington Ave., New York, NY 10170 (212-490-2510). **Subscription Prices:** United States and possessions: $24 a year payable in U.S funds. Canada and all other countries: add $13 (U.S. funds) for each year. 80 percent of dues is designated for magazine subscriptions. Current issue price is $4 (U.S. funds) Back issue price is $5 (U.S. funds). Periodical postage paid at Washington, DC and additional mailing offices. **Mailing Lists:** From time to time we make our subscriber list available to companies that sell goods and services by mail that we believe would interest our readers. If you would rather not receive such mailings, please send your current mailing label, or an exact copy, to: SMITHSONIAN, Mail Preference Service, P.O. Box 420311, Palm Coast, FL 32142-0311. **Subscription Service:** Should you wish to change your address, or order new subscriptions, you can do so by writing SMITHSONIAN, P.O. Box 420311, Palm Coast, FL 32142-0311, or by calling 1-800-766-2149. Postmaster: Send address changes to SMITHSONIAN, P.O. Box 420312, Palm Coast, FL 32142-0312. Printed in the USA.

The Bosporus [p. 110]
The Bosphorus by John Freely, Redhouse Press (Mercan, Istanbul), 1993

Muscle Beach [p. 124]
"The Legacy of Muscle Beach" by Tina Plakinger, *Ironman*, July 1992
"Muscle Beach Memoir: Return to Camelot" by Carol Ann Weber, *Muscular Development*, June 1993
"The Venus of Muscle Beach" by Marla Matzer, *The Los Angeles Times Magazine*, February 22, 1998
"The Body Worshipers of Muscle Beach" by Joel Sayre, *The Saturday Evening Post*, May 25, 1957

Old Newspapers [p. 138]
Newseum, The Freedom Forum World Center, 1101 Wilson Boulevard, Arlington, Virginia 22209
Collecting American Newspapers by Jim Lyons, Jim Lyons (P.O. Box 580, Los Altos, California 94023), 1989

Hutterites [p. 148]
Hutterite Society by John A. Hostetler, Johns Hopkins University Press, 1997
The Hutterites in North America by John A. Hostetler and Gertrude Enders Huntington, Harcourt Brace College Publishers, 1996
Hutterites in North America Website: www.hutterianbrethren.com

John Marshall [p. 156]
History of the United States (vols. 1 and 2) by Henry Adams, Library of America, 1986
The Federalist Papers by Alexander Hamilton, James Madison, John Jay, edited by Clinton Rossiter, New American Library, 1961
John Marshall: Definer of a Nation by Jean Edward Smith, Henry Holt, 1996
The Great Chief Justice: John Marshall and the Rule of Law by Charles F. Hobson, University Press of Kansas, 1996
American Sphinx: The Character of Thomas Jefferson by Joseph J. Ellis, Alfred A. Knopf, 1997
The Blackwell Encyclopedia of the American Revolution, edited by Jack P. Greene and J. R. Pole, Blackwell Reference, 1991

Authors Wanted
Successful, full service, subsidy publisher can transform your manuscript into an attractive, quality book — and promote it. Send your completed work for a no-cost, no obligation assessment — or request a free brochure.
Rutledge Books, Inc. • 1-800-278-8533
Dept. SM23 • P.O. Box 315 • Bethel, CT 06801

TURKEY
Discover the best—in style. Hike to remote ruins, balloon over Cappadocia, sail the Turquoise Coast. Luxuriate at Four Seasons Hotel Istanbul.
SMALL GROUPS. FREE VIDEO AND BROCHURE.
INCA (Inca Floats, Inc.)
1311-ST 63rd Street, Emeryville, CA 94608
510-420-1550 incafloats@aol.com

NEW YORK'S FAMOUS
FULTON STREET NY LOBSTER & SEAFOOD CO. INC. NY
4 Gourmet Lobster Tails $29.95
Makes a great gift! Plus S&H
Call Toll Free 24hrs. 1-888 LOB-TAIL
WWW.1888LOBTAIL.COM

OAXACA
Spend 5 days/4 nights
in a 16th. Century Convent
For as little as $326* deluxe room
CAMINO REAL OAXACA
The way you always imagined Mexico to be . . .
Call: **1-800-7Camino (1-800-722-6466)**
and ask for our Oaxaca Magic
*Per person, double occupancy 12/20/98 to 4/10/99

EIFFEL TOWER PIN *Remember Paris...*
with this charming reminder from James Breakell's work shop. Sterling $35, 14karat Gold $220. Add $4 handling.
Catalog (800)767-6411 or breakell.com
J.H. Breakell & Co.
132 Spring Street, Dept. SMET
Newport, RI 02840

Extraordinary Destinations
BOTSWANA: Private safari with ***Lynne Leakey.*** Visit delta, savanna, the Kalahari; Victoria Falls; S. African game preserve.
ARCTIC CANADA: Sail Great Slave Lake in crewed or bareboat yachts; or cruise the Mackenzie River in 20-passenger riverboat.
PAPUA NEW GUINEA: Stone age people; Sepik river & Irian Jaya cruises; primitive villages; rain forests, highlands & jungle.
GREENLAND: Musk ox, reindeer, whales, seals; Eskimo art & culture; Spectacular fjords & icebergs. Danish cuisine.
Details: 1-800-552-8546
Katlin Travel Group, www.katlintravel.com

THE LAST PAGE

The Hit Parade From Hell

BY KEN BUDD

From breakfast to lunch, afternoon to evening, over and over and over, I heard "The Devil Went Down to Georgia"

IN FRANZ KAFKA'S "METAMORphosis," Gregor Samsa wakes up to find that he has been transformed into a gigantic insect. I recently woke up with "The Devil Went Down to Georgia" in my head. My morning was worse.

"The Devil Went Down to Georgia" was a country hit for the Charlie Daniels Band in 1979. It's a song about Satan, who, in one of his less ambitious moments, challenges a Georgia boy named Johnny to a fiddle contest. If the Devil wins, he gets Johnny's soul. If Johnny wins, he gets the Devil's shiny gold fiddle. Naturally, good triumphs; Johnny wins and dares the Devil to "come on back" for a rematch.

The Devil came back all right, but it wasn't in Georgia. I had barely hit the snooze bar on my alarm when "The Devil Went Down to Georgia" began playing in my head. And playing. And playing some more. From breakfast to lunch, afternoon to evening, over and over and over, I heard "The Devil Went Down to Georgia." By the end of the day, Johnny had won the Devil's gold fiddle more than 14 billion times.

Hearing a song repeatedly—even a song you like—is irritating. Hearing a song you don't like, repeatedly, is madness. It's like an endless attack of mental hiccups. And these hiccups, unfortunately, aren't limited to "The Devil Went Down to Georgia." My brain is a cerebral jukebox of moldy oldies. I know all the words to "Tie a Yellow Ribbon 'Round the Ol' Oak Tree." And "Copacabana." And the theme from *The Love Boat*. I once spent an entire morning singing Alka-Seltzer's "Plop, Plop, Fizz, Fizz" jingle.

Remembering antacid jingles is not a talent. It's a curse. My brain, I've decided, should be a file cabinet. Then I could pull out the drawers filled with trivial information—songs performed by the Brady Bunch—and replace them with something substantive, like an understanding of quantum physics. It's no wonder I never learned the state capitals—"The Devil Went Down to Georgia" is wasting 50 states' brain space.

Of course, songs like "Lucille" are supposed to get stuck in your head. Hit songs have catchy melodies called hooks. Record companies like hooks because they sell records. Consumers hear a song, get it stuck in their heads, then feel they'll go insane unless they buy the record IMMEDIATELY. The problem is, those hooks latch on to the subconscious like ticks. Then, suddenly, after many years, they spring to life. One reference—a casual comment, an innocent dream—can trigger a long-buried melody. I probably dreamed I was looking for a john in Georgia while fiddling with the radio and having a devil of a time getting a soul station.

I suppose it's all my fault. If the mind is truly a file cabinet, I'm the one who filled it with trash. Jingles and rock songs are junk food for the mind. They're greasy and gooey and easy to consume. (The reason no one has Tchaikovsky in their heads is because Tchaikovsky used more than three chords.) For 30 years, I've maintained a steady diet of cultural Ring Dings. My mental arteries are clogged with "Sugar, Sugar."

The only way I knew to dispose of "The Devil Went Down to Georgia" was to think of another song. So what was the first song that came to mind? "Jingle Bells." And no, it was not Christmas.

Next time, if I'm lucky, I'll be transformed into a gigantic insect.

DANIEL VASCONCELLOS

Be prepared.

11,000 new drivers every day. It's an unsettling thought. Especially when some of these kids are your sons and daughters. Not to worry. Let them drive your Chevy™ Lumina.® They'll be surrounded by a comprehensive safety package for a lot less money than Taurus or Intrepid.* Not bad for the most affordable six-passenger car in its class. You can't protect your kids forever. But you can be prepared. Lend them your Lumina. Genuine Chevrolet. The cars more Americans trust.

Lumina Genuine Chevrolet®

Call 1-800-950-2438 or visit www.chevrolet.com. *Based on comparison of base MSRPs. ©1998 GM Corp. Buckle up, America.

IN HIS QUEST TO REACH THE PLANET'S FOURTEEN HIGHEST PEAKS WITHOUT THE AID OF SUPPLEMENTAL OXYGEN, ED VIESTURS RELIES ON HIS VAST EXPERIENCE, STAMINA AND WILL.

BUT PERHAPS MOST OF ALL, HE RELIES ON HIS ROLEX TIMEPIECE.

Ed Viesturs credits his long career in one of the world's most demanding activities to the fact that he strictly times his ascent and descent. By this, he means that every summit attempt is carefully planned to ensure that he not only has time to make it to the top, but also back down. If Viesturs calculates that he cannot return to high camp before dark he aborts the attempt, no matter how close he is to the summit. This makes Viesturs highly dependent on the reliability of his timepiece. That's why he's chosen a watch which has already proven its mettle in 15 days of grueling tests conducted by the Contrôle Officiel Suisse des Chronomètres. It's also why he considers his Rolex Explorer II such an important piece of equipment.

ROLEX

Explorer II
Officially Certified Swiss Chronometer

For the name and location of an Official Rolex Jeweler near you, please call 1-800-36ROLEX. Rolex, ♛, Oyster Perpetual and Explorer II are trademarks.

Special Advertising Section

your hawai'i

AMERICAN EXPRESS Cards

MORE HAWAII

Designing the Vacation that's perfect for you.

INSIDE:
maps, plans, calendars & Aloha!

HAWAI'I®
The Islands of Aloha

6 Islands, 5 Vacations,
plus advice from travel agents who actually live here.

Rent with Avis in Hawaii using your American Express® Card and the savings will really sizzle. With special daily and weekly rates at participating locations on convertibles, minivans and sport utility vehicles, traveling in style has never been easier. You can enjoy the ivory beaches of Oahu to the crimson sunsets over Diamond Head. Then follow the road to Hana and take in the spectacular natural waterfalls along the way. There's so many exciting wonders of Hawaii to enjoy, and you can see them all with Avis.

Plus, our GM and other fine cars include unlimited mileage, so you save even more. And with so many Avis locations throughout Hawaii, renting a car couldn't be more convenient. Now is a great time for American Express Cardmembers to take in all the beauty of Hawaii with Avis.

For more information and reservations, call your travel consultant or Avis toll free: **1-800-331-1212**.

DAILY RATE		WEEKLY RATE
Convertible	$45	$139 Subcompact
Minivan	$45	
Sport Utility Vehicle	$45	
Ask for Rate Code: RI		**Ask for Rate Code: RA**
		Saturday night stayover required. 5-day minimum rental required.

Rental must be charged to the American Express Card. For more information and reservations, call **1-800-331-1212. Optional LDW $18.99/day or less.** Vehicles and rates subject to availability at participating Avis Hawaii airport locations and require an advance reservation. A maximum rental period applies. Rates not available during holiday and other blackouts and may be surcharged during peak periods. Renter must meet Avis age, driver and credit requirements. Minimum age is 25, but may vary by location. Taxes, local government surcharges, airport recoupment fee up to 12% at some locations, vehicle licensing fee of no more than $.50/day and optional items such as additional driver fee and fuel service, are extra. A frequent flyer tax applies to mileage awards. Cars must be returned to renting location by January 31, 1999. Rates subject to change and may not be used with any coupons, other promotions or offers.

AMERICAN EXPRESS Cards

AVIS® We try harder.

Or reserve your car online at www.avis.com

©1998 Wizard Co., Inc.

Avis features GM cars.

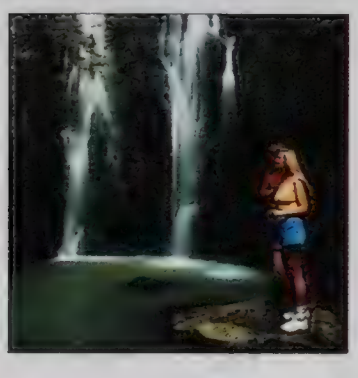
Discover your Hawai'i and DISCOVER a new you

Take a deep breath. Close your eyes. Then think of your Hawai'i, the one you see in your dreams, and exhale slowly while saying "Ahhhhh."

Feel better?

You can feel better still. You can actually be here, in the Islands of Aloha.

Your Hawai'i is waiting for you. Come discover it, and you may also discover a new you. A "you" that returns home refreshed, re-energized, with a new attitude and new perspectives.



First Time Visitors

Adventure Travelers

This miracle of renewal comes from Hawaii's Aloha Spirit, the unique combination of welcome, fun, love, and generosity that makes these islands different from any others.

But a little advance planning can help too, so in these pages we offer some tools to help you design your vacation. There's advice from Travel Agents who actually live here in the islands. And we've suggested sights, dates, and experiences for first-time visitors, adventure travelers, families, those interested in culture and ecology, and for those who are "feeling under 30."

Of course, all of us have a little "adventure" inside. Hawai'i makes everybody feel like a kid again. And no matter how many times you've visited the islands, there will always be something new to discover. So it's a good idea to check out the suggestions on all these pages.

Contents

Your First Time 4

Adventuring in the Islands 7

The Adventure Continues 8

Families in Paradise 12

The Real Hawai'i.23

The Really, Real Hawai'i ..24

Under Thirty Island Action .26

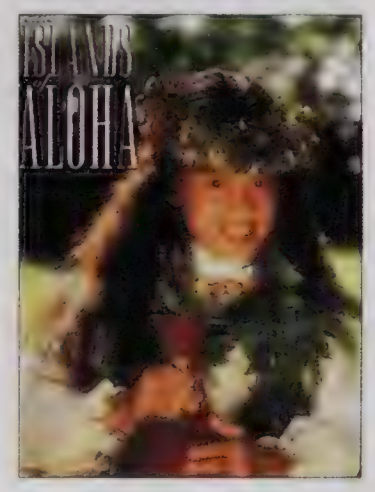
HAWAI'I®
The Islands of Aloha
1-800-GO-HAWAII
www.gohawaii.com

Family Vacationers

Singles/Young People

Cultural and Ecological Tourism

Next step is to contact your local travel agent. Or since there's more to do and see than we can possibly mention here, visit our website at www.gohawaii.com, or call 1-800-GO-HAWAII and ask for the free official Hawai'i travel planner, "The Islands of Aloha."



your first tim

If you're planning your first visit to the Islands of Aloha ... lucky you! Everyone who has visited here will tell you of wonderful sights, people, tastes, sports, and things to do that "you just can't miss." There really are thousands of these experiences, and picking among them is very difficult but here are a few that are sure to impress "the new you"

1998-1999 THE BIG EVENTS

Sept. 11-Oct. 18
Aloha Festivals on all Islands
Sept. 20
Sam Choy Poke Recipe Contest (Big Island)
Sept. 12-13
Taste of Lahaina (Maui)
Sept. 23-24
Kupuna Hula Festival (Big Island)
Oct. Poi Fest (O'ahu)
Oct. 11
4th Annual Princess Ka'iulani Keiki Hula Festival (O'ahu)
Nov.- 8
BankOh Kī Hō'alu -Hawaiian Slack Key Festival (Kaua'i)
Nov. 18-21
King Kalākaua Hula Festival (Big Island)
Nov. 23-25
Maui Invitational Basketball Tournament
Jan. 7-10/99
Mercedes PGA Tour Championship (Maui)
Jan. 31-Feb.1/99
Whale watching Weekend (Oahu)

CALL 1-800-GO-HAWAII FOR A FREE TRAVEL PLANNER OR VISIT www.gohawaii.com

YOU CAN TASTE

In the "just can't miss" category, don't forget Hawaiian Regional Cuisine, an ambrosial, on-going work of art that uses fresh island produce, herbs, fish, fruits, meats, and large quantities of imagination. The word to describe it is "Ono!"

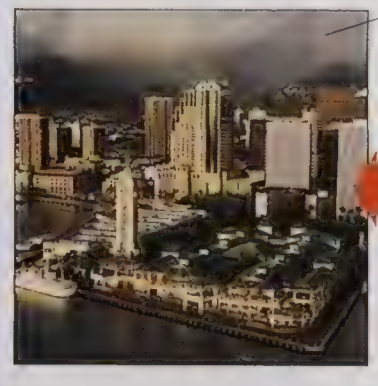
Hanalei Bay

The breathtaking beauty of Hanalei was featured in the movie "South Pacific." Kaua'i has been the location for numerous movies including "Raiders of the Lost Ark," "Jurassic Park," and most recently "Six Days, Seven Nights."

Waimea Canyon

Mark Twain called this "The Grand Canyon of the Pacific." Twenty-five miles of cliffs sculpted in ochres and greens and swathed in sunshine and drifting, multi-colored rainbows. Occasionally, you may spot a white, long-tailed tropicbird soaring by.

Kaua'i



Honolulu

A vibrant and truly international city, Honolulu is a fascinating, ethnic "stir fry" of festivals, events, and legendary historical sites like Honolulu harbor's "Aloha Tower" and America's only royal residence, 'Iolani Palace.

Kalaupapa

A National Historical Park, Kalaupapa is where the priest, Father Damien, ministered to patients in the 1800's. It is still only accessible by small plane- or by mule ride down a 3,000 foot cliff.

VACATION QUICK FACTS

Average temperature - 83F high 67F low
Average ocean temperature - 74°F
Gateway mainland cities - Atlanta, Chicago, Dallas, Los Angeles, Minneapolis, Newark, San Francisco, Seattle, Anchorage, Houston, Portland, St. Louis
Overseas Airlines - 23 mainland,16 international
Interisland flights - more than 3,000 a week
Rental Cars - available on all islands
State Fish - Humuhumunukunukuapua'a
State Bird - Nēnē Goose **State Flower** - Hibiscus **State Sport** - Surfing

here's the HAWAI'I you just can't miss

O'ahu's North Shore

Do the circle-island drive through scenic rural O'ahu to the world's mecca for surfers-- Hale'iwa Town and the beaches of Waimea, Sunset, and Pipeline. The temperature is still in the 80's, but the winter storms up north send down waves 30 and 40 feet high.

"If you've seen one, you haven't seen them all"

"Each island is different. If you've been to one or two, don't think you've seen all of Hawai'i. Many of my clients have told me their second or third trip to a brand new island was even more fun than their first visit."

Waikīkī

The world's most famous beach holds out 2 & 1/2 miles of golden sand and rolling surf curving up to the slopes of Diamond Head Crater. From luxury to economy, you'll find more activities, shops, clubs, shows, restaurants, and overall fun per square inch here than anywhere else in the world.

Shipwreck Beach

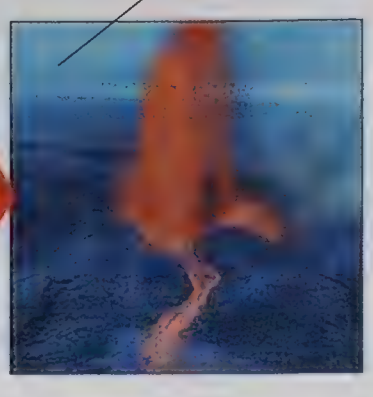
Currents from far away shores and climes carry a wealth of finds to this deserted beach on secluded Lāna'i. Who knows what you'll discover from this charming island's romantic past.

Lahaina

The first capital of Hawai'i and once an old whaling town, Lahaina is now a National Historical District and the heart of Maui's sizzling nightclub scene. Some of Hawaii's finest restaurants and art galleries are located here.

Volcanoes National Park

The most popular attraction in Hawai'i, Volcanoes National Park presents an awesome spectacle of ever-smoking and occasionally erupting Kīlauea Crater. Not infrequently, visitors can safely watch geysers of fiery lava towering 300 feet high.



Haleakalā

This extinct volcanic crater atop a 10,000 ft mountain is where astronauts trained for their expedition to the moon. At night, it fills with clouds. With sunrise, the clouds burn away in a heavenly display of light and color that is one of the world's most awesome spectacles.

A NEW YOU
Be Starry-eyed again

Hawai'i has the purest nighttime skies in the world, and several of the world's most powerful telescopes are located atop Hawaiian mountains. But you don't need to go to a mountaintop . Just looking up at the stars from the beach is a remarkable experience. When was the last time you really saw the stars?

A special invitation for freeloaders.

ASTONISHING TRIPLE DEAL

Fifth Night Free

Your fifth night in paradise is free! At 25 Aston hotels and condominium resorts in Waikiki, Maui, Kauai, and the Big Island.

Free Luau

Enjoy a spectacular show and a huge Hawaiian feast.

Buy one luau, get one free. Up to $58 value.

Free Savings

Hundreds of dollars worth of discounts, freebies, and extras on dining, shopping, golf. An Aston exclusive!

Hawaii's #1 Resorts

Choose from more than 5,000 rooms and suites in 25 hotels and condominium resorts on four islands. All on or near the beach. From budget to luxury.

Call your travel agent or 1-800-92-ASTON (922-7866)
www.aston-hotels.com

ASTON
Hotels & Resorts
A RESORTQUEST COMPANY

© Aston Hotels & Resorts 1998. Valid through 12/22/99 some restrictions apply.

Adventuring in the ISLANDS

VACATIONS for the **BOLD,** the **FIT,** and the **curious**

You don't have to be a professional athlete to have adventures in Hawai'i. The primary qualification is curiosity and a desire to get off the beaten path. Here are a few things that make Hawai'i an ideal place to reinvigorate the bold, the fit, or the simply curious.

Moloka'i Ranch

Camping out has never been so much fun or so luxurious. Guides prepare your tent, which is equipped with beds and solar showers, and you commune with nature on Hawaii's "Most Hawaiian Island."

Fern Forest Four Wheeling

Rent a jeep and roll up the spectacular Munro Trail through a lush fern forest to where you can see most of Lāna'i plus O'ahu, Maui, Moloka'i and the Big Island of Hawai'i as well.

Reeling in the Big One

Seas off the Big Island's Kona Coast are home to the legendary Blue Marlin and other big game fish. The fishing is so good, teams come from around the world to compete in an annual Billfish Tournament.

Kīlauea Crater

Biking Down a Volcano

"Haleakalā." In Hawaiian it means "House of the Sun." Vans take you up the slopes of this extinct volcano in time to see the sun-rise over the crater at 10,000 feet. Then you coast all the way back down to sea level.

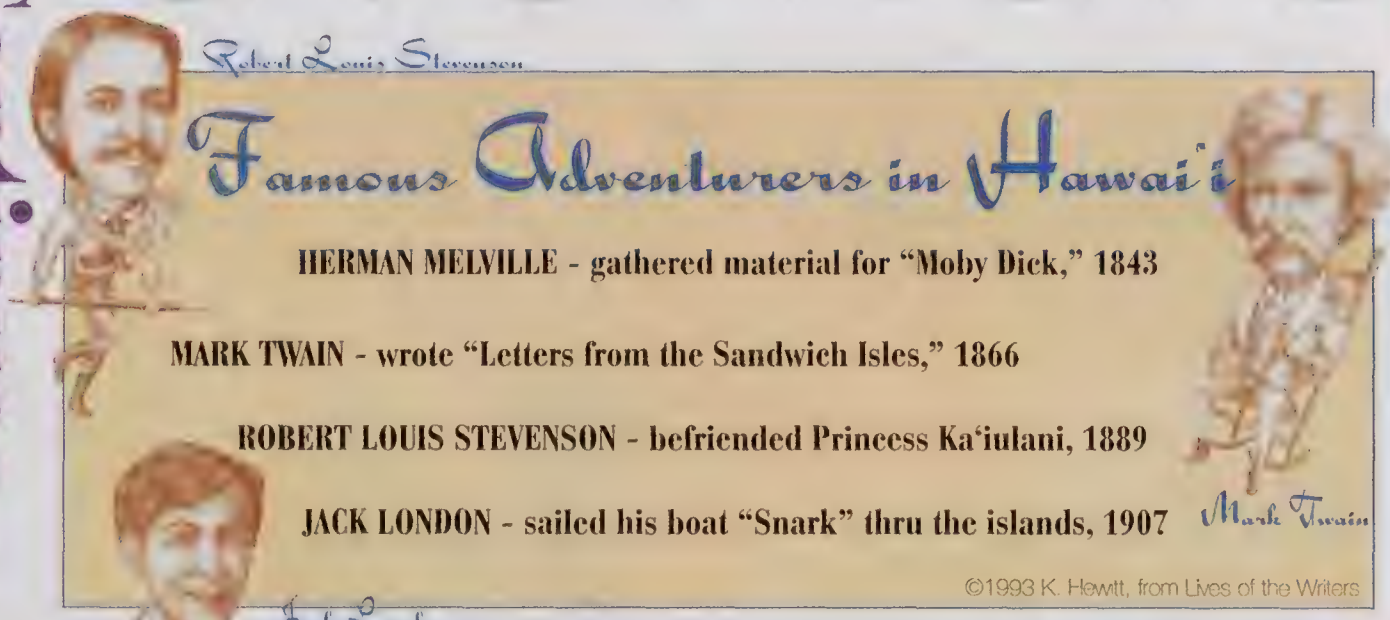
A NEW YOU
Renew your fire

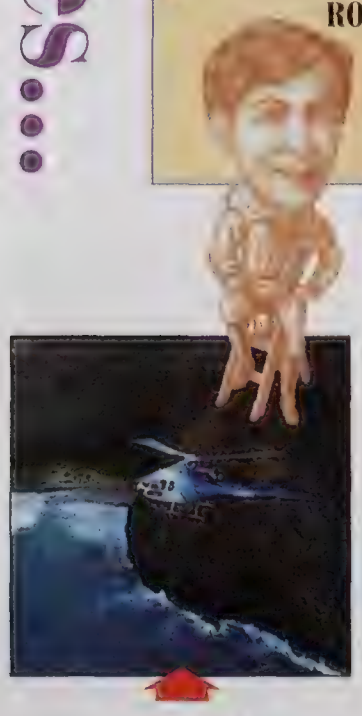
The sight of earth itself being born can give you a new perspective on life. Here's what Mark Twain wrote after spending a night watching the floor of Kīlauea crater on Hawaii's Big Island.

"Over a mile square of it was ringed and streaked and striped with a thousand branching streams of liquid and gorgeously-brilliant fire! It looked like a colossal railroad map of the State of Massachusetts done in chain lightning on a midnight sky. Imagine it - imagine a coal-black sky slivered into a tangled net work of angry fire!"

Turn the page and the adventure continues...

the Adventure Continues...


Robert Louis Stevenson
Famous Adventurers in Hawai'i
HERMAN MELVILLE - gathered material for "Moby Dick," 1843
MARK TWAIN - wrote "Letters from the Sandwich Isles," 1866
ROBERT LOUIS STEVENSON - befriended Princess Ka'iulani, 1889
JACK LONDON - sailed his boat "Snark" thru the islands, 1907
©1993 K. Hewitt, from Lives of the Writers
Mark Twain
Jack London



Helicopter thru Paradise

Kaua'i, Maui, O'ahu and the Big Island all offer spectacular helicopter rides that allow you to soar through valleys, down by waterfalls and out over beaches that are otherwise completely inaccessible. The untouched beauty is truly astonishing.

Kaua'i

O'ahu

Paddling the Nā Pali Coast

Sea kayaks can be rented for excursions along Kauai's remote and beautiful Nā Pali coast--miles and miles of verdant cliffs and pristine beaches. This is the location Hollywood picked to shoot "King Kong."

Hiking "The Windward Side"

On O'ahu's windward side, half an hour from Waikīkī, there are lush valleys, remote mountain ranges, and idyllic lagoons that look the way they did 100 years ago. Hiking trails are well-maintained. You can also go horseback riding and four-wheeling.

Barry Lum,
American Express Travel,
Hawai'i Big Island

CHECK IT OUT
See also:
Culture & Ecology page 21
Under 30 Action page 30

"SAFETY from Respect"

"The best way to have a safe vacation: is to respect the sea & the land the way the ancient Hawaiians did. Hawai'i isn't some theme park. This is real life here."

Dates with Adventure

Sept. 5
6th Annual Tantalus Trek & Triple Trek 10m/50k (O'ahu)

Sept. 5-6
27th Annual Queen Lili'uokalani Long Distance Canoe Race (Big Island)

Sept. 27
20th Annual Bankoh Nā Wāhine O Ke Kai Canoe race (Moloka'i)

Oct. 3
Run to the Sun-To Haleakalā (Maui)

Oct. 3
Ironman Triathlon (Big Island)

Oct. 6-11
Xterra Sports Festivals (Maui)

Oct. 9
Dental Devil Dog Dash Run (O'ahu)

Oct. 13
5th Annual Moloka'i Ranch Professional Rodeo

Nov. 12-14
16th Annual Vans Triple Crown of Surfing Series (O'ahu)

Nov. 16.17.18
PGA Grand Slam of Golf (Kaua'i)

Dec. 4
Kapalua Tennis Garden (Amateurs & Pros) (Maui)

Dec. 13
Annual Honolulu Marathon (O'ahu)

Jan 9-21/99
Maui Pro Surf Meet

Jan 20-24/99
Senior PGA Golf Championship (Big Island)

Jan 29-31/99
The Senior Skins Golf Game at Mauna Lani (Big Island)

March 15- 28
Annual Maui Marathon

CALL 1-800-GO-HAWAII FOR A FREE TRAVEL PLANNER OR VISIT www.gohawaii.com

Get a free trip to your favorite island with Hawaiian Airlines.

Whether it's hiking in Maui, surfing in O'ahu, golf on the Big Island or just plain relaxing on a pristine beach in Kaua'i, the lure of Hawai'i remains irresistible. But why settle for just one island when you can have two?

And we want to show you more of the islands by giving you a free flight to another island when you fly us from our six mainland hubs to any of our neighbor island destinations: Kaua'i, Maui, Moloka'i, Lana'i or the Big Island. This special offer begins October 1, 1998 and all travel must be completed by January 31, 1999. That gives you plenty of time to see Hawai'i in all her beauty and splendor.

Present the attached card to your travel agent or call us directly at **1-800-367-5320**. Let the Wings of the Islands take you to some unforgettable places. Or visit us at **www.hawaiianair.com**

HAWAIIAN AIRLINES.
Wings of the Islands

"We could be at my parents' house playing backgammon."

Make the most of your vacation with Sign & Travel® from American Express.

Sign & Travel gives you the option of paying for your eligible travel expenses over time—right on the American Express® Card. You can enroll in Sign & Travel or simply request it each time you book a trip. Either way, you'll always have the flexibility to travel the way you want—and pay for it the way you want. Which means there really is no limit to what you can do, or where you can go. To find out more about Sign & Travel and other extended payment options, just call **1-800-528-4800.**

SIGN & TRAVEL®

do more.® AMERICAN EXPRESS Cards

Not all Cardmembers are eligible. Eligibility is based on tenure and a review of your payment history.

Do More, See More, Get More With Outrigger's Big Kahuna Hawai'i Vacations and Pleasant Hawaiian Holidays.®

Have more fun in Waikīkī with Outrigger's Big Kahuna. Your 6-day Pleasant Hawaiian Holidays Package includes airfare credit, round-trip airfare, hotel accommodations, flower lei greeting, airport/hotel transfers, and all hotel taxes. Plus, you'll receive a Big Kahuna Value Passport worth hundreds of dollars in dining and shopping discounts, $25-$50 in Big Kahuna Bucks** good for activities, free Big Kahuna Surf Party,*** and Big Kahuna Fun Pak with T-shirts, beach bag, and lots more.

Outrigger Waikīkī On The Beach
Newly Renovated

Outrigger Prince Kūhiō
Near The Beach

Outrigger Islander Waikīkī
Waikīkī's Newest Hotel

From Los Angeles:
Outrigger Waikīkī.....$645*
Outrigger Prince Kūhiō.....$577*
Outrigger Islander Waikīkī....$505*
Departures from LAX. Hawai'i prices based on American Trans Air. Inventory is capacity-controlled.

From Chicago:
Outrigger Waikīkī.....$926*
Outrigger Prince Kūhiō.....$859*
Outrigger Islander Waikīkī....$787*
Departures from ORD.

From New York:
Outrigger Waikīkī.....$926*
Outrigger Prince Kūhiō.....$859*
Outrigger Islander Waikīkī....$787*
Departures from JFK/EWR/LGA.

OUTRIGGER®
HOTELS · RESORTS

OUTRIGGER'S BIG KAHUNA℠ HAWAI'I VACATIONS
www.thebigkahuna.com

Pleasant Hawaiian Holidays.

FOR RESERVATIONS, CALL ANY TRAVEL AGENT OR PLEASANT HAWAIIAN HOLIDAYS AT 800-2-HAWAII.

*Rates are per person, double occupancy, and subject to change. Holiday/seasonal supplements, blackout dates, and any restrictions apply. Subject to availability. Call for applicable dates. Prices do not include PFCs of $3–$12, federal taxes of $36, or segment tax of up to $6. CST#1007939-20. **Big Kahuna Bucks have no cash value, no change will be given, and no refunds allowed. ***Big Kahuna Surf Party free to guests at Outrigger Waikīkī. Other Big Kahuna guests in Waikīkī may attend by using Big Kahuna Bucks towards admission.

Families in

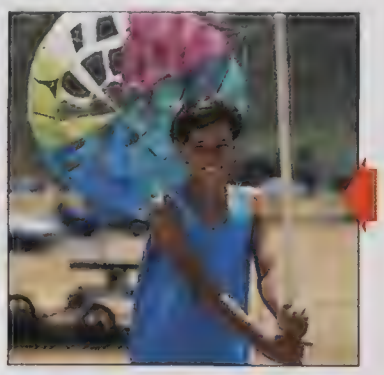
Fun, education, plus some "R & R" for Mom & Dad

Hawai'i is great for families because there are things to do that are fun for all ages (like the beach). Plus things that are just right for young kids, or older kids, or for Mom & Dad to get a little "R & R" (refreshment and renewal) by themselves. You can all vacation together, or you can each go your separate ways for a while and re-group.

Kids in Hawai'i know that whenever Mom or teacher lets them, they can go outside to play.

"Kids LOVE IT HERE. The weather's always warm, and the aunties and uncles are always full of Aloha.

Everybody hates to GROW UP"



Talk to Fish

If kids learning to swim are reluctant to put their head under water, here's a great incentive. Every color of the rainbow seems to swim by. Children also have fun learning the Hawaiian names. Hawaii's state fish is the humuhumunukunukuapua'a.

Go Fly a Kite

Because of the trade-winds, you won't find a better place to fly a kite than in Hawai'i. And because of the multi-ethnic heritage in the islands, there are some wonderful Chinese, Japanese, Thai, Filipino, and Vietnamese designs.

Kaua'i

Mom & Dad ESCAPE!

Many Hawai'i hotels have "Kids Camps" or programs that will give children a full day of fun and Mom and Dad a blissful day off for ...

Golf!

There are more than 70 courses in Hawai'i. Many are sites of world-famous tournaments and rank high in the "Top Ten" lists.

Shopping!

Hawai'i shopping is a delight. Free keiki (children's) hula troops are often entertaining as you stroll from European designer shops to island fashion boutiques.

What Hawai'i Families do.

Sept. 1-4
Hawai'i In Space (O'ahu)
Sept. 5-7
Parker Ranch Rodeo (Big Island)
Sept. 8
Ice Cream Festival (Maui)
Oct. 4
Children's Discovery Center Sneak Peek (O'ahu)
Oct. 23-24
Spooky Stories Tour (O'ahu)
Oct. 25
Lahaina Coolers Historic Fun Run (Maui)
Nov. 28-29
Mission Houses Holiday Craft Fair (O'ahu)
Dec. 4
Christmas Light Parade (Kaua'i)
Dec. 6
Santa comes to Wailea (Maui)
Dec. 11
A Candlelight Christmas at Mission Houses (O'ahu)
Dec. 19
Waimea Town Festival of Lights (Kaua'i)
Dec. 31
First Night Maui '98 (Maui)
Jan 18/99
Hula Bowl (Maui)

CALL 1-800-GO-HAWAII FOR A FREE TRAVEL PLANNER OR VISIT www.gohawaii.com

BEYOND the BURGER *Hawai'i kids' favorite foods include:*

"Shave Ice" - Sno-cones in tropical flavors like liliko'i, coconut, and vanilla bean.

"Malasadas" - Hot Portuguese style doughnuts rolled in sugar.

"Crack Seed" - Sweet 'n salty dried preserved fruit.

"Spam Musubi" - Rice balls wrapped in seaweed and flavored with (yes) spam.

PARADISE

Sand castles

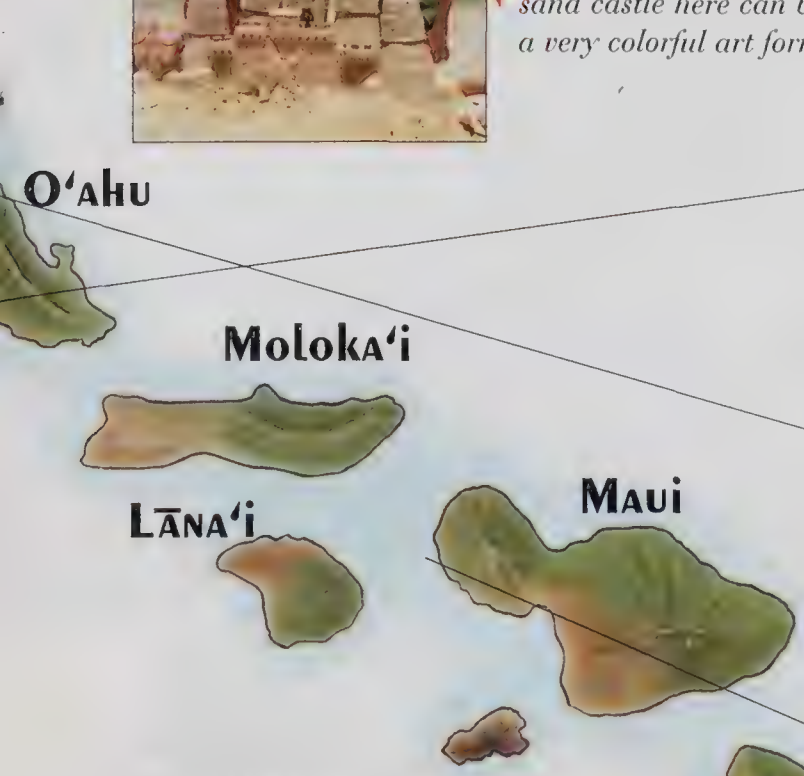
Since Hawai'i beaches come in colors of gold, white, black, red, and green sand, building a sand castle here can be a very colorful art form.

O'ahu's Other Side

A trip to the most popular of the islands of Aloha isn't complete without seeing the astonishing natural beauty of "The Windward side." Here are verdant valleys, knife-edge ridges, plunging waterfalls, pristine beaches and sleepy, idyllic lagoons.

Pearl Harbor

See where America's World War II began. The Arizona Memorial pays tribute to the heroes at the site of the sunken battleship. The U.S. Navy offers official tours of the memorial, and the war's end is now also commemorated by the newly anchored Battleship Missouri, site of the Japanese surrender.



The Big Island of Hawai'i

See Hawaiian Cowboys

The paniolo (Hawaiian cowboys) are a great tradition in the islands, and the abilities to rope, ride (and play the 'ukelele) are valuable skills. Waimea on the Big Island, Makawao on Maui, Waimānalo on O'ahu, and Moloka'i Ranch are some places where you might even see a Hawaiian rodeo. (See calendar.)

Whale Watching & Maui Ocean Center

Maui is the whale watching-capital of the world, and now the new Maui Ocean Center features interactive learning stations on whales. There are also more than 60 living exhibits of other sea creatures from turtles to eagle rays.

Walk Thru a Volcano

Thurston lava tube is a huge tunnel created by a once molten river of lava in Volcanoes National Park. An easy trail goes through a grove of giant ferns and down into the tunnel. At school when they ask, "What did you do on vacation?" Johnny can answer, "I walked through a volcano."

A NEW YOU From head to toe

The ancient Hawaiians were skilled in the art of massage. They called it "lomi-lomi," and you can experience this rejuvenating experience as well as more than 30 other different styles of massage (shiatsu, Swedish, etc.) offered at Hawaii's spas and hotels.

CHECK IT OUT

See also:

The Hawai'i you can't miss page 2

Culture & Ecology page 21

Under 30 Action page 30

Hilton Hawaiian Village
On Waikiki's Best Beach

Hilton Hawaiian Village stands at the gateway to Waikiki Beach and spreads across it's widest stretch. Next to the beach you'll find a two tiered Super Pool — the largest in Waikiki.

Tropical gardens, waterfalls, ponds and exotic wildlife surround the Hilton Hawaiian Village's four towers. The exquisite Ali'i Tower has its own private pool, fitness center and concierge, offering you a private corner of paradise. Nature lovers will be drawn to the Village where macaws, flamingos, penguins and graceful black swans thrive.

Enjoy six hours of free daily activities which range from aerobics to hula lessons and lei making to a hike to the top of Diamond Head crater. Your children will love the Rainbow Express Keiki Club for ages 5-12 ($32 daily, including lunch). On Friday nights, the family is invited to a celebration of Hawaiian culture and entertainment, culminating in a spectacular fireworks display.

Known as a center of international entertainment, the Hilton Hawaiian Village contains 20 lounges and restaurants including the award-winning Bali-by-the-Sea and Golden Dragon. Visitors to the Village find they need never leave! World-class

shopping is available at more than 90 specialty shops, boutiques and services throughout this spectacular resort. The Rainbow Bazaar is home to a replica Thai Buddhist temple, a Japanese tori gate and other exotic architecture from the Far East. Ali'i Plaza is host to another favorite attraction — the resort's Penguin Pool. Leave time to experience the pleasures of Hawaii beyond Waikiki. United Vacations packages are also available at the Hilton Turtle Bay Resort on Oahu's scenic North Shore and the fabulous Hilton Waikoloa Village on Hawaii's Big Island.

Hilton
Hawaiian Village
On Waikiki's Best Beach

For reservations call your professional travel agent or

UNITED VACATIONS®
800-32-TOURS (800-328-6877)
http://www.unitedvacations.com

HILTON HAWAIIAN VILLAGE

Enjoy the spirit of aloha at the Hilton Hawaiian Village for five days including, 5th night free, round-trip airport/hotel transfers, welcome orientation breakfast, lei greeting, all applicable taxes and round-trip air via United Airlines from just $819 *plus receive 1,000 MileagePlus™ Bonus Miles.*

CITY	5 NIGHTS FROM
Los Angeles/San Francisco	$819
Denver	$999
Chicago/New York/Washington D.C.	$1019

Prices are per person based on double occupancy. Oahu prices are valid 9/7-12/8/98 (rates after 12/8/98 will be slightly higher). Sunday departures are slightly higher. Restrictions apply. Prices do not include Passenger Facility Charges of up to $12. Free nights are subject to change without notice and included in prices above. Black out dates apply.

100% Natural Ingredients.

As you take in all the natural splendor of Kaua'i, you might sense this island paradise would be a wonderful place to play some golf. Trust your senses.

Weaving around lakes and marching toward the seacoasts past towering waterfalls, you'll find four of Hawaii's top-10 courses. Kaua'i is the home to the '91, '94, '95, '96 and '97

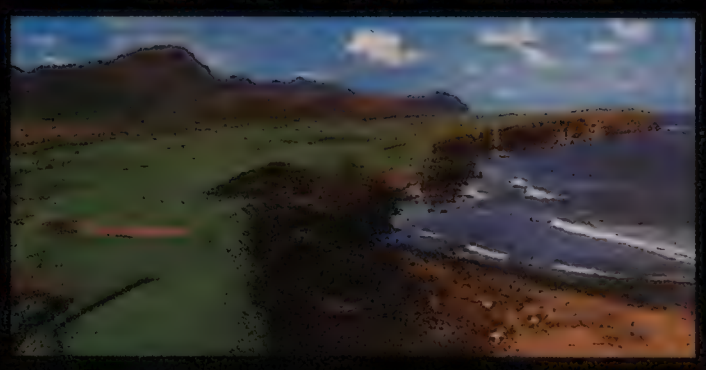
PGA Grand Slam of Golf. And while it isn't the place to lower your handicap, it is the place to enjoy the ultimate golfing experience.

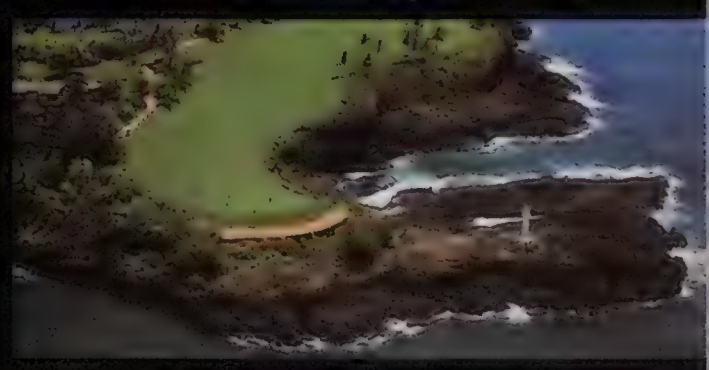
To book your Kaua'i Golf Vacation, call **1-888-213-1833.**

KAUA'I
Hawaii's Island of Discovery

AMERICAN EXPRESS
Cards

Call today for a FREE Kaua'i Vacation Planner. **1-800-262-1400 ext. 130** *or visit our website at http://www.kauaivisitorsbureau.org*





MORE HAWAII THAN YOU CAN IMAGINE.

Hilton Waikoloa Village has it all. Championship golf, world class spa, tennis, shopping, dining, 3 pools, water sports and much more. Enjoy the tropical splendor of lagoons, waterfalls and gardens along the ocean's edge on the Big Island's sunny Kohala Coast for five days including Avis/Alamo car rental, 5th night free, full American breakfast daily, one category room upgrade, all applicable taxes and round-trip air via United Airlines from just $1039 plus receive 1,000 Mileage Plus™ Bonus Miles.

CITY	5 NIGHTS FROM
Los Angeles/San Francisco	$1039
Denver	$1239
Chicago/New York/Washington D.C.	$1249

Prices are per person based on double occupancy. Kona prices are valid 9/7-12/8/98 (rates after 12/8/98 will be slightly higher). Sunday departures are slightly higher. Restrictions apply. Prices do not include Passenger Facility Charges of up to $12. Free nights and hotel specials are subject to change without notice and included in prices above. Rental car does not include $2 daily highway usage surcharge and other applicable taxes.

Hilton
Waikoloa Village
On Hawaii's Big Island

For reservations call your professional travel agent or

UNITED VACATIONS®

800-32-TOURS (800-328-6877)

http://www.unitedvacations.com

SPECIAL ADVERTISING SECTION

AMERICAN EXPRESS PRESENTS SPECIAL VALUES FROM THESE ONE-OF-A-KIND HAWAII HOTELS AND ATTRACTIONS

HAWAII'S HIDDEN TREASURES.

This exceptional collection features some of Hawaii's favorite one-of-a-kind places to stay. And each is pleased to present a very special offer to American Express® Cardmembers as part of this year's MORE HAWAII program. Simply review the special legend below for details on each available offer, then check each hotel's listing for a corresponding symbol*. To take advantage of the special value extended by each merchant, simply make advance reservations and pay with the American Express® Card.

SPECIAL VALUE LEGEND CHOOSE 1 SPECIAL VALUE PER HOTEL OR ATTRACTION

- 5th NIGHT FREE when you pay for 4 nights with the American Express Card.*
- SPECIAL DINING CREDIT when you pay for your stay with the American Express Card.*
- CONFIRMED UPGRADE when you pay for your stay with the American Express Card.*
- SPECIAL VALUE when you pay with the American Express Card (see listing).*

"Discover The Unhurried Way of Life" at this low-rise, Hawaiian resort on Napili Bay, with full service restaurant and bar. Complimentary breakfast daily with five-night minimum stay, restricted dates apply.

NAPILI KAI BEACH CLUB
Discover the Unhurried Way of Life

Napili Bay, Maui, Hawaii
Reservations: 1-800-367-5030

Complimentary breakfast daily with five-night minimum stay, restrictions apply. Offer expires 12/15/99

Spacious villas • Luxury homes • Fully-equipped kitchens • 1,650 acre Kapalua Resort • 3 beaches • 3 championship golf courses • Economical packages

The Kapalua Villas
Maui

Kapalua, Maui
Reservations: 1-800-545-0018
www.kapaluavillas.com

Receive a Maui gift basket, a $25 value, when you pay for your stay with the American Express Card.

A luxury oceanfront hotel often praised as the "most Hawaiian" resort in exclusive Wailea, Maui. Spacious rooms, private lanais, and spectacular views. Three pools, two restaurants and Wailea's finest luau.

Aston Wailea Resort
Maui, Hawaii

Aston Wailea Resort, Maui, Hawaii
Reservations: 1-800-922-7866
Ask for "Free Up Your Vacation" program.

Overlooking Kamaole Beach Park III, each spacious studio, one, two and three bedroom suite has a full kitchen and private lanai. Guests enjoy complimentary tennis, pool and jet spa.

KamaoleSands

2695 South Kihei Road, Kihei, Maui, Hawaii
Reservations: 1-800-367-5004

The secluded Island of Lana'i offers two luxurious resorts and a myriad of activities including championship golf, sporting clays, water sports and more. Ask about our 5th night and breakfast free promotion and our other packages.

LANA'I
Hawaii

Lanai, Hawaii
Reservations: 1-800-321-4666

$50 dining credit with five-night minimum stay, restrictions apply. One per room; non-transferable; and no cash value. Offer expires 12/16/99.

Located at the entrance to Waikiki, guests enjoy spacious rooms with a pool and jet-spa; meeting room facilities and a business center. Great shopping, restaurants, and Waikiki Beach are all nearby.

WAIKIKI TERRACE HOTEL
2045 Kalakaua Avenue, Honolulu, Oahu, Hawaii
Reservations: 1-800-367-5004

Oceanfront plantation-style bungalows and one and two bedroom condominium suites set on 35 acres of landscaped gardens. Tennis courts, swimming pool and two world-class golf courses are located nearby.

KIAHUNA PLANTATION RESORT
&
The Beach Bungalows at Kiahuna

2253B Poipu Road, Poipu, Kauai, Hawaii
Reservations: 1-800-367-5004

Spacious beach and golf course condominiums in the prestigious resorts of Wailea and Makena, Maui. Daily housekeeping, fully equipped kitchens, washer/dryers, private patios, air-conditioning. Five championship golf courses and five beautiful beaches. Car-condo packages available.

DESTINATION RESORTS HAWAII
Resort Condominium Rentals
Wailea And Makena Resorts

Reservations: 1-800-367-5246
www.destinationresortshi.com

Valid at Wailea Ekolu Village, Wailea Grand Champions Villas, Wailea Ekahi Village. Offer expires 12/19/98.

*Offer may not be combined with any other offer or discount. Certain restrictions apply. All offers subject to space availability, and advance reservations are required by all hotels. Check with individual hotels or your travel professional for complete details. ©1998 American Express Travel Related Services Company, Inc.

Luxury Hotels of Hawaii

Discover your own paradise

at the Kahala Mandarin Oriental, Hawaii's legendary resort. Secluded, yet minutes from world-renowned Waikiki, this extraordinary oceanfront resort blends the gracious hospitality of traditional Hawaii with Mandarin Oriental's quality and attention to service.

EXPERIENCE KAHALA, THE MOST ROMANTIC SETTING ON THE ISLAND OF OAHU.

"More Kahala" especially for American Express Cardholders. $269 per night, single/double occupancy, includes breakfast buffet daily for two persons. Get a choice of either late checkout or 50% off the resort's new Dolphin Interaction program when booking "More Kahala." Call your travel agent or Mandarin-Oriental reservations at 800-526-6566 or 800-367-2525.

KAHALA
MANDARIN ORIENTAL
HAWAII
SM

Hawaii as it was meant to be

A paradise free from the distractions of phones, televisions and radios, Hawaii's most Polynesian resort is located on the Kona Coast of the Big Island of Hawaii. Voted by readers of *Travel & Leisure* for the World's Best Award, Kona Village features 125 individual thatched-roof cottages on 82 acres of oceanfront property where you can enjoy perfect seclusion and privacy. Airport transportation, all meals, a children's program and many of the resort activities are included. Visit our website at www.konavillage.com for more information, including rates and floor plans. See your travel agent or call 800-367-5290.

DISCOVER LIFE'S SIMPLE PLEASURES....

When you pay with the American Express® Card, children five years old and under are complimentary, including all meals, except during May and September.

Kona Village RESORT
at Historic Ka'upulehu

PO Box 1299, Kailua-Kona, Hawaii 96745
Phone: 808/325-5555
Fax: 808/367-5290 Email: kvr@aloha.net

do more. AMERICAN EXPRESS Cards

More Hawaii

Receive *free* information from our **Travel Planner** advertisers. Just fill out the attached card and mail.

1. **American Express Travel**
With over 40 years of experience in providing travel arrangements to Hawaii, American Express can accommodate any of your needs.

2. **Aston Wailea Resort**
Luxurious, oceanfront hotel on Maui. Free 5th night. Free upgrade. Free breakfast. Call 1-800-92-ASTON and ask for "Free Up Your Vacation".

✆ **Aston Hotels & Resorts**
Get your 5th night free in Hawaii, plus free luau & discounts! Call 1-800-92-ASTON and ask for the ASTONishing Triple Deal.

3. **The Sun Is Calling. Avis Has The Answer**
Reserve your place in the sun today. For reservations and information call your travel consultant or Avis at 1-800-831-8000.

4. **Destination Resorts Hawaii - (Condominium Rentals Wailea/Makena Resorts, Maui)**
Studios, one, two and three bedroom beachside and golf course condominiums. Daily housekeeping included. Car-condo packages and preferential golf rates. Call 1-800-367-5246.

5. **Hawaii Islands of Aloha**
Say Aloha to a live operator to order the official travel guide "Islands of Aloha" FREE. Call 1-800-GO-HAWAII.

6. **Hawaiian Airlines**
Offering award-winning service from the west coast to Hawaii and over 140 all jet flights per day to Kaua'i, O'ahu, Maui, Moloka'i, Lana'i and the Big Island. Call 1-800-367-5320.

7. **Hilton Hawaiian Village**
On Waikiki's Best Beach. Lush tropical gardens and exotic wildlife. Award winning dining, shopping and worldclass entertainment. Call 1-800-HILTONS.

8. **Hilton Waikoloa Village**
On Hawaii's Big Island. Experience breathtaking tropical gardens, waterways, award winning dining and shopping. Enjoy golf, tennis, the Kohala Spa and Dolphin Quest. Call 1-800-HILTONS.

9a. **Hyatt Regency Kauai Resort & Spa**
A classic Hawaiian experience in a garden paradise. Call 1-800-55-HYATT.

9b. **Hyatt Regency Maui Resort**
The sun-drenched shores of Kaanapali Beach await you at this Hawaiian resort. Call 1-800-55-HYATT.

9c. **Hyatt Regency Waikiki Resort**
The splendor of Hyatt's newly renovated facilities awaits you with luxurious accommodations, award-winning restaurants, exclusive boutiques and Hawaiian hospitality. Call 1-800-55-HYATT.

10. **Island of Lana'i**
Lana'i is an island paradise which beckons those who seek luxury and adventure off the beaten track. Call 1-800-321-4666.

11. **Kahala Mandarin Oriental**
Hawaii's legendary resort is complemented by Mandarin Oriental's renowned attention to service. Extraordinary setting on O'ahu. "Take me to Kahala!" Call 1-800-367-2525

12. **Kamaole Sands**
Located on 15 acres of tropical gardens, across from Kamaole Beach III. All studios and suites have fully-equipped kitchens. Call 1-800-367-5004.

13. **The Kapalua Villas**
Spacious villas and luxury homes set amidst the 1650-acre Kapalua resort. Three championship golf courses, 3 beaches and complimentary tennis. Maui's best golf packages. 1-800-545-0018.

✆ **Kauai, Hawaii's Island of Discovery**
Call for a FREE vacation planner. 1-800-264-1400 ext. 130.

14. **Kiahuna Plantation & The Beach Bungalows at Kiahuna**
Plantation-style bungalows & condominium suites set on 35 acres of landscaped gardens. Tennis & swimming located in Kiahuna tennis complex. Call 1-800-367-5004.

15. **Kona Village Resort**
Free of TV's, phones and radios. 125 cottages on 82 acres. Call 1-800-367-5290.

16. **Napili Kai Beach Club**
"Discover The Unhurried Way of Life" at this low-rise Hawaiian resort on Napili Bay, with full service restaurant and bar. 1-800-367-5030.

17. **Outrigger Hotels & Resorts**
See more, do more, and have more fun with Outrigger's Big Kahuna Hawaii Vacations. Call any travel agent, Pleasant Hawaiian Holidays 1-800-2-HAWAII, or 1-800-OUTRIGGER.

18. **Sheraton Hotels In Hawaii**
Stay four nights at a Sheraton Hotel in Hawaii and enjoy a fifth night free. For more information, call 1-800-782-9488, or visit www.sheraton-hawaii.com

19. **The Sign and Travel® Account**
Sign and Travel is a feature of the American Express Card that allows cardmembers to extend payment on travel related expenses such as airline tickets, cruises and tour packages. To use Sign and Travel, cardmembers simply ask their travel agent at the time of purchase. For more information call American Express customer service at 1-800-528-4800.

20. **Waikiki Terrace Hotel**
A short distance to the Hawaii Convention Center, Waikiki beach, shopping & restaurants. Hotel features pool, sundeck & business center. Call 1-800-367-5004.

21. **Westin Resorts Hawaii**
Discover Westin Resorts Hawaii - 5 luxurious hotels and resorts in O'ahu, Maui and the Big Island of Hawaii. Call your travel agent or 1-800-WESTIN-1 for reservations.

Experience

HAWAII

as you never have before.

AFFORDABLY.

HYATT RESORTS HAWAII®

Feel the Hyatt Touch®

HYATT REGENCY
WAIKIKI
RESORT

4 nights from

$699

• Round-trip airfare via United Airlines • One FREE night
• FREE breakfast buffet daily for two
• FREE one room category upgrade
• Round-trip airport/hotel transfers

HYATT REGENCY
MAUI
RESORT

5 nights from

$1,029

• Round-trip airfare via United Airlines • One FREE night
• FREE breakfast buffet daily for two
• Avis® rental car

HYATT REGENCY
KAUAI
RESORT & SPA

5 nights from

$1,149

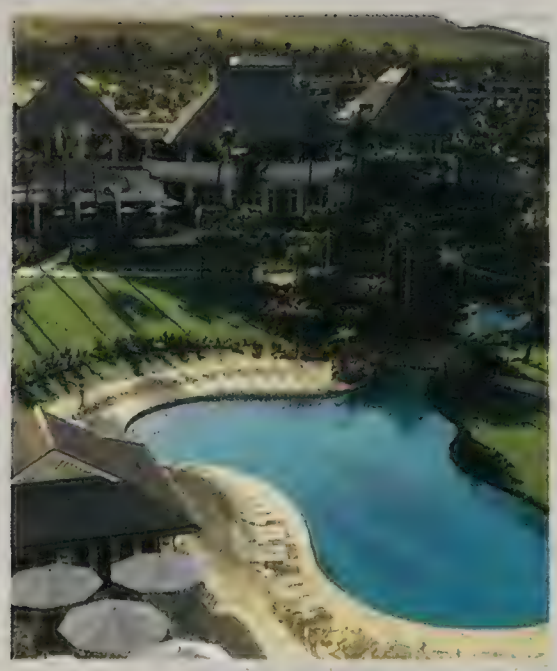
• Round-trip airfare via United Airlines • One FREE night
• FREE breakfast buffet daily for two
• Avis® rental car

Even if you're a seasoned Hawaiian traveler, this could be a new adventure. Because we're offering you a chance to experience the kind of Hawaiian vacation only Hyatt can offer.

For reservations, call your travel planner or Hyatt Vacations at

1 800 772 0011

Prices shown are per person/double occupancy and include room, room tax and round-trip economy class airfare from Los Angeles, for travel completed 8/25-12/8/98. Blackout dates may apply. Waikiki price is for Fri.-Wed. departures and reflects a Mountainview room upgrade. Maui price reflects a Terrace room. Kauai price reflects a Garden room and includes round-trip inter-island airfare. Prices do not include incidentals or gratuities. Advance reservations are required and prices are subject to airline and hotel availability, and may vary significantly based on departure and destination. Other dates and departure cities available at different prices; call your travel planner for details. Prices are not retroactive and are subject to change without notice. CST #2021234-50. Hyatt Hotels and Resorts® encompasses hotels and resorts managed, franchised or operated by two separate groups of companies – Hyatt Corporation and its affiliates and affiliates of Hyatt International Corporation. *©1998 Hyatt Corp.*



Sheraton Maui, Kā'anapali Beach, the Island of Maui.

View from the Sheraton Waikiki, the Island of O'ahu.

Free night and daily dining dollars from Sheraton's Hawai'i.

Best locations on the best beaches.

Sheraton Kauai Resort, Po'ipū Beach, the Island of Kaua'i.

In an extraordinary offer, stay 5 nights at any Sheraton Hotel in Hawai'i at our spectacular SureSaver rates and you'll enjoy the 5th night FREE...plus daily dining dollars of $50 or $25. In Waikīkī, this program also includes airport transfers for two. Just ask for Rate Plan SURE5ND. Dining credits are valid for stays from September 1 through December 20, 1998. For more information or reservations, call your travel professional or 1-800-782-9488. Also ask about other special Sheraton's Hawai'i offers.

Sheraton Resorts	SURESAVER DAILY RATE	YOUR SAVINGS	DAILY DINING CREDIT
Sheraton Waikiki Waikīkī Beach, O'ahu			
Ocean Front	**275**	135	25
City View	**210**	30	
Sheraton Moana Surfrider Waikīkī Beach, O'ahu			
Historic Banyan Ocean	**269**	126	25
City View	**229**	31	
Sheraton Princess Kaiulani Waikīkī Beach, O'ahu			
Ocean View	**185**	80	25*
Waikīkī City Side	**125**	35	
Sheraton Maui Kā'anapali Beach, Maui			
Ocean View	**299**	61	50
Garden View	**260**	30	
Sheraton Kauai Resort Po'ipū Beach, Kaua'i			
Ocean View	**275**	85	25
Garden View	**195**	55	
THE LUXURY COLLECTION			
The Royal Hawaiian Waikīkī Beach, O'ahu			
Ocean View	**395**	130	25
Historic Wing	**275**	30	
Princeville Resort Hanalei Bay, Kaua'i			
Ocean View	**395**	100	50
Mountain/Garden	**290**	60	
The Orchid at Mauna Lani Kohala Coast, Hawai'i			
Ocean View	**395**	100	50
Garden View	**265**	85	

Offer valid for stays through 12/19/98 on Maui, Kaua'i and Island of Hawai'i and through 12/27/98 on O'ahu. Room rates and dining credits are per room per night and exclude taxes.
Fifth Night Free: Applicable to a continuous stay at one hotel.
*Dining Credits: Valid 9/1-12/20/98. Not applicable to beverages; no credit value for unused dining credits which expire at the end of each day. *Not applicable for Princess Kaiulani City Side rooms.*
Not combinable with other offers. Subject to availability and change. Additional terms apply.

Sheraton
HOTELS & RESORTS
HAWAII

www.sheraton-hawaii.com

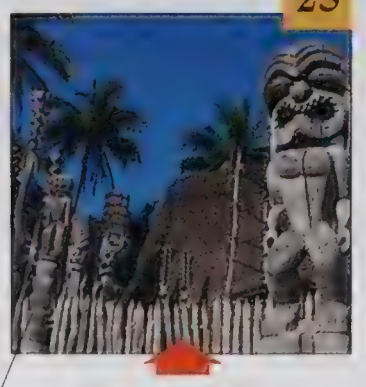
SHERATON WAIKIKI • SHERATON MOANA SURFRIDER • SHERATON PRINCESS KAIULANI • SHERATON MAUI • SHERATON KAUAI RESORT
THE LUXURY COLLECTION: THE ROYAL HAWAIIAN • PRINCEVILLE RESORT • THE ORCHID AT MAUNA LANI

HAWAI'I

There

Old and new, there are a million stories in the Islands of Aloha

There's always something new happening in Hawai'i. An evening's entertainment might include Hawaiian chant and hula, a Mozart symphony, Japanese kabuki theater, Italian opera, a British rock concert, or a Broadway road show. Hawaii's multi-ethnic heritage also has a fascinating history you can explore in hundreds of ways. Here's a sampling.

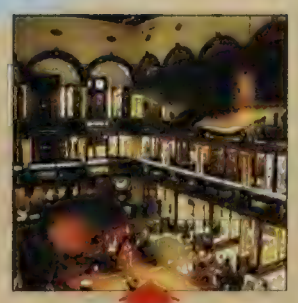


Place of Refuge
The carefully preserved Place of Refuge was a place in old Hawai'i where those who had done wrong could escape to safety. Not even the most powerful chief could break the sacred kapu *that protected them.*

The Big Island of Hawai'i

Honolulu Academy of Arts
A collection for O'ahu's multi-ethnic society. Everything from Gauguin's impressions of Tahiti to Chinese scroll painting.

Mission Homes
Actual rooms of Hawaii's missionary past at O'ahu's Mission Houses Museum, the Wai'oli Mission House on Kaua'i, Bailey and Baldwin Houses on Maui, and the Lyman Museum on the Big Island



Bishop Museum
In-depth depictions of Hawaii's geology, flora, fauna, a planetarium, and interpretations of the cultural history of the Pacific.

'Iolani Palace
On the island of O'ahu, America's only royal residence provides a look back at the Hawaiian monarchy's Victorian lifestyle.

Turn the page for the really real Hawai'i...

ethnic Festivals and Holidays FROM AROUND THE WORLD

CALL 1-800-GO-HAWAII FOR A FREE TRAVEL PLANNER OR VISIT www.gohawaii.com

Sept. 4,11,18,25 Hanapēpē Art Night (every Friday Night) (Kaua'i)
Sept. 5-6 Queen Lili'uokalani Outrigger Canoe Races (Big Island) & Aloha Festival's Kā'ū Hula Ho'olaule'a (Big Island)
Sept. 6 'Iolani Palace & Queen Lili'uokalani's (Birthday) (O'ahu)
Sept. 18-26 Mokihana Festival (Kaua'i) 9/23 flower lei-making
Oct. 10 Annual Eō E Emalani I Alaka'i Festival- Royal procession recreation (Kaua'i)
Oct. 16-17 Hula O Nā Keiki (Maui) Kā'anapali Beach Hotel
Oct. 17 13th Annual International Costume Ball (Kaua'i)
Nov. 5-7 World Invitational Hula Festival (O'ahu)
Nov. 14 Honoka'a Taro Festival (Big Island)
Nov. 16 King Kalākaua Birthday at the Palace (O'ahu)
Dec. 4 Honolulu Holiday Antiques and Collectibles Show (O'ahu)
Jan 18-23 Hula Fest Activities (Maui)
Jan 30 He Lei Hiwahiwa Concert, A Lei of Cherished Traditions (Kaua'i)
Jan 31 Moloka'i Makahiki
March 11 Prince Kūhiō Celebration, canoe races, holokū ball, luaus (Kaua'i)
March 14-21 Queen Ka'ahumanu Festival (Maui)

the Really real HAWAI'I

Earth, air, fire, water, and Aloha

The building blocks of Hawai'i have been earth, air, fire, water ... and Aloha. The results are islands that refresh and renew visitors with endless discoveries of nature's bounty.

Silversword

One of the world's rarest plants, the silversword grows atop Hawaii's dramatic volcanic peaks, Haleakalā and Mauna Kea. It can take up to 50 years for one to flower.

Koa Wood

Ancient Hawaiians used the huge trunks of the koa tree to make their outrigger canoes. Today, the beautiful golden-grained hardwood is used for fine furniture and crafts.

"The life of the land is preserved in righteousness."

"King Kamehameha III gave Hawai'i her motto, "The life of the land is perpetuated in righteousness." The people of these islands have enormous aloha for their land, the 'āina."

Hawaiian Flowers

They're everywhere. Orchids appear on your pillow at night. Fragrant white ginger, pīkake, and plumeria scent the breezes, and the state flower, the hibiscus, proclaims itself in a hundred colorful varieties.

Rain Forest

Moist tradewinds and rapid changes in elevation create micro-climates ranging from dry desert to lush rainforests with hanging vines, prehistoric ferns, spongy moss, glistening orchids, and bright red 'ōhi'a blossoms.

Hawaii's Birds

You awake to the cooing of doves and chattering of mynah. In the forests, you can see colorful honeycreepers. Over the ocean, soaring seahawks. And atop the mountains, the rare state bird, the nēnē goose.

A NEW YOU In Touch with Nature

Many visitors to the Islands of Aloha say their most memorable experience was also the least expensive. There are hundreds of well-maintained hiking trails with grades of difficulty ranging from beginner to expert. A few minutes walk can take you to a whispering bamboo grove, a splashing mountain waterfall, or the expansive solitude atop a mountain ridge. It puts you in touch with nature ... and yourself.

CHECK IT OUT

See also:

The Hawai'i you can't miss page 2

Adventuring in Hawai'i page 7

they
spend their vacation in Hawaii.
spend their days holding hands.
spend their nights holding tight.
who are they sleeping with?

WESTIN

Resorts Hawaii

© 1998 Westin Hotels & Resorts

Stroll endless beaches. Conquer a challenging golf course.
Snorkel through kaleidoscopes of fish. Delight in each other.

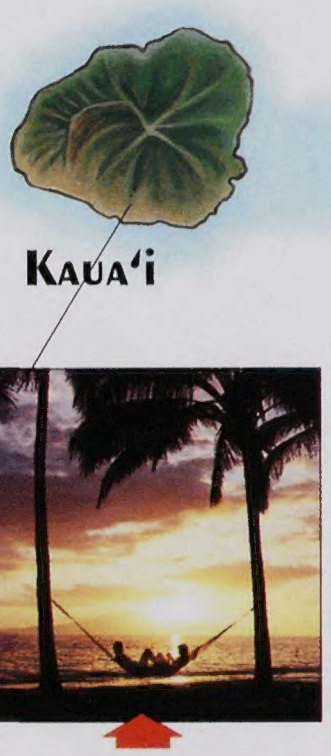
Choose your travel partner wisely.®

For reservations at over 100 hotels and resorts worldwide
call your travel agent or

1-800-WESTIN-1

www.westin.com

island Action



Kaua'i

O'ahu

Moloka'i

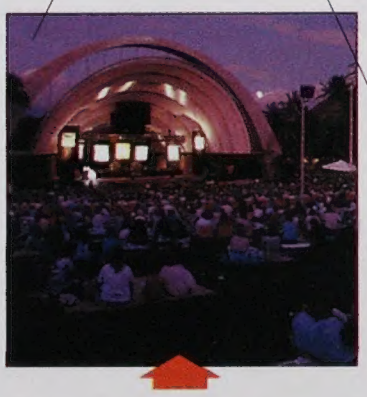
Lānai'i

Maui

The Big Island of Hawai'i

Hapa
Their fusion Hawaiian sound made the national "Billboard" charts. Maui is their home. Their audience is everywhere.

Honeymoons
Kaua'i is a legendary locale for lovers. As the line goes, "If you can't agree on this, you shouldn't be getting married."



Concerts, Shells & Poi
Concerts under the stars at the Waikīkī Shell are "Chicken Skin" time. On the other side of O'ahu, find Rock's alternative scene at concerts like "Poi Fest." Hot local groups get their start here before moving on to the mainland. And mainland groups cruise thru on tour.

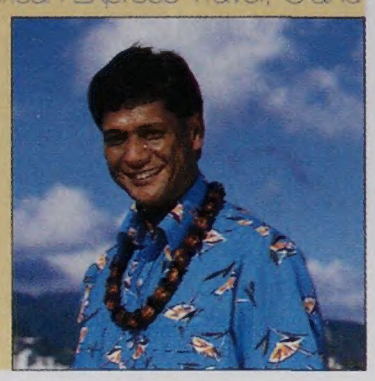
The Club Scene
There are clubs in every resort on every island. Owners might be from the islands, from the mainland, from Japan, from Sweden ... from nearly anywhere. Dance. Listen. Watch. Live and learn.

Karaoke
Go ahead, sing along, you can do it. You've got a great voice. Really. Honest!

"Yes! There are deals."

Alika Tabion, American Express Travel, O'ahu

Sure Hawai'i has it's 4-star resort hotels, but there are also hundreds of smaller hotels just a block or two from the beach where the prices are low and the vibes are friendly. Ask your local travel agent. Hawai'i can be a bargain.



what to do if you're feeling under30

It's the beach by day and the music by night. One gives you surfing, strolling, volleyball, parasailing, kayaking, etc. etc. And for the other, check out Waikīkī on O'ahu, Lahaina on Maui and Kona on the Big Island. You can find rock, pop, hip-hop, jazz, acid jazz, poi (alternative), funky folk, reggae, blues, blue grass, techno, and Hawaiian (of course) music. Day or night, pretty much everybody you meet is here to party.

Hi, where are you from?

The beach scene: hot sun, cool surf, and everybody's from somewhere else.

UNDER 30 events

Sept. 26-7
Annual Kona Block Party & Hilo Ho'olaulea (2 Big Island events)

Oct. 10-11 & 17-18
The Hāmākua Music Festival (Big Island)

Oct. 17
13th Annual International Costume Ball (Kaua'i)

Oct. 31
Halloween Mania (O'ahu)

Oct. 31
Halloween In Lahaina (Maui)

Nov. 12-14
Winter Wine Escape (Big Island)

Nov. 6-19
Hawai'i International Film Festival (Statewide)

Dec. 25
Jeep Aloha and O'ahu Bowls (O'ahu)

Jan 21
Port of Call: The Romance (Maui)

Feb. 27
Valentine's Wine Tasting Extravaganza (Kaua'i)

CALL 1-800-GO-HAWAII FOR A FREE TRAVEL PLANNER OR VISIT www.gohawaii.com

PhotoCredits

Akaka Falls Big Isle © Ray Mains - Pacific Stock, Beach Scene © HVCB, Bikers at Waimea Canyon © Freas Frame Hawaii - Stock Photos Hawaii, Biking Down Haleakala © Ann Cecil - Stock Photos Hawaii, Bishop Museum © Ann Cecil - Stock Photos Hawaii, The Club Scene © Outrigger Entertainment, Couple Shopping in Waikiki © Ann Cecil - Stock Photos Hawaii, Couple Singing Karaoke © Twice Gibson - Pacific Stock, Family Hiking at Kualoa Ranch Oahu © Dana Edmunds - Pacific Stock, Hanalei Bay © Douglas Peebles, Hawaiian Koa Wood © Kyle Rothenberg - Pacific Stock, Hawaiian Village at Polynesian Cultural Center © Ann Cecil - Stock Photos Hawaii, Helicopter Through Paradise © Douglas Peebles, Hibiscus Flower © Dana Edmunds - Pacific Stock, Honolulu Academy of Arts © Freas Frame Hawaii - Stock Photos Hawaii, Honolulu Harbor Aloha Tower Oahu © Douglas Peebles, Humpback Whale Breaching © Jim Watt - Pacific Stock, Iiwi in Ohia Tree with Lehua Blossom © Jack Jeffry - Photo Resource, Iolani Palace © Ann Cecil - Stock Photos Hawaii, Kalaupapa Peninsula Molokai © Ann Cecil - Stock Photos Hawaii, Kamakou Preserve Molokai © Douglas Peebles, Kayaking the Na Pali Coast © William Waterfall - Pacific Stock, Kids With Sand Castle © Sun Star - Stock Photos Hawaii, Kilauea Volcano Big Isle © Reggie David - Pacific Stock, Kilauea Volcano Erupting at Night © Creative Focus - Pacific Stock, Kite Flying © Sri Maiva Rusden - HVCB, Lahaina Sunset © Bill Young - Stock Photos Hawaii, Lanikai Beach Oahu © Douglas Peebles, Mangoes and Tropical Fruit © Rothenborg Pacific - Pacific Stock, "Mighty Mo" and Arizona Memorial Oahu © Ann Cecil - Stock Photos Hawaii, Mission Houses Oahu © Ann Cecil - Stock Photos Hawaii, Mokulele Valley Waterfall © Dave Fleetham - Pacific Stock, Munro Trail Lanai © Brent Black Pacific Stock, Surfing the Pipeline © Vince Cavaaio - Pacific Stock, Pacific Blue Marlin and Angler © Rick Gaffney Pacific Stock, Picture Taking © HVCB, Shave Ice © Ann Cecil - Stock Photos Hawaii, Shipwreck Beach Lanai © Ann Cecil - Stock Photos Hawaii, Silver Sword © David Olsen - Stock Photos Hawaii, Sunrise at Haleakala Crater Maui © Dana Edmunds - Pacific Stock, Tiki Hale City of Refuge Big Isle © Douglas Peebles, Thurston Lava Tube Big Isle © Douglas Peebles, Wailea Maui © Douglas Peebles, Waikiki at Night © Douglas Peebles, Waikiki Beach Sand Castle © Douglas Peebles, Waikiki Shell at Dusk © William Waterfall - Pacific Stock, Waterfall on Windward Oahu © OVB, Woman Receiving Back Massage © Dana Edmunds - Pacific Stock.

CHECK IT OUT

See also:

The Hawai'i you can't miss page 2

Adventuring in Hawai'i page ...30

Culture & Ecology page 21

This special editorial/advertising supplement was created by the TRAVEL & LEISURE® Special Sections department and did not involve the magazine's editorial staff.

Fly United Airlines to Hawaii with The American Express® Card.

Fly on United Airlines for exceptional service, comfort and convenience on your next visit to Hawaii and enjoy special savings when you pay for your flight with the American Express Card. The American Express Card's "Welcome" sign is your guide to Hawaii's finest establishments for shopping, dining, sightseeing and more. United has more flights to Hawaii than any other major airline and flies non-stop to Hawaii from Chicago, Los Angeles and San Francisco and offers direct service from most U.S. cities every day.

UNITED RISING

FLY UNITED AIRLINES AND PURCHASE YOUR TICKET WITH THE AMERICAN EXPRESS® CARD TO ENJOY THESE EXCLUSIVE CARDMEMBER OFFERS.

$25 off published round-trip economy fare of $150-$249

$50 off published round-trip economy fare of $250-$349

$75 off published round-trip economy fare of $350 or more

Promo Code: MPN138

Ticket Designator: MPN25D/MPN50D/MPN75D

Use this certificate toward the purchase of up to TWO ROUNDTRIP economy tickets on the same itinerary for travel to Hawaii from any city served by United Airlines, Shuttle by United, and/or United Express in the 50 U.S. states.

TERMS AND CONDITIONS: To make reservations for this offer, call United Airlines (UA) at 1-800-241-6522 or your local travel professional. Please refer the agent to United Airlines' offer/promo MPN138.

1. **Promo Code:** MPN138.
2. **Valid Carrier:** United Airlines, Shuttle by United, or United Express.
3. **Valid Routing:** Roundtrip travel on United/Shuttle by United/United Express to Hawaii from any of the 50 states. All travel must be via the routes of UA in which UA publishes economy class fares.
4. **Advance Purchase:** Within 24 hours of making reservations, at least 14 days prior to departure.
5. **Valid Ticket Dates:** Sep 1, 1998 through May 1, 1999.
6. **Valid Travel Dates:** Sep 15, 1998 through May 15, 1999, excluding Blackout Dates. All travel must be completed by midnight May 15, 1999.

Blackout Dates-1998: Nov. 24, 25, 28, 29, 30; Dec. 18, 19, 23, 27, 28.

Blackout Dates-1999: January 3, 4, March 21-April 19. (Or based on the provisions of the fare purchased, whichever is more restrictive.)

7. **Allowable Fare Types:** Any Published Roundtrip economy fare.
8. **Class of Service:** Applicable fare.
9. **Min/Max Stay:** Saturday night stay required. (Hawaii travel, 3 day minimum only.) Travel must be completed within 30 days after departure from origin.
10. **Mileage Plus Accrual:** Yes.
11. **Ticketing:** United Airlines or Travel Professional.
12. **Taxes/Service Charges:** All surcharges and segment fees, including Passenger Facility Charges, are the responsibility of the passenger and will not be considered for minimum fare requirements. Charges must be paid at time of ticketing.
13. **Certificate Restrictions:** Certificate is required for discount and must be presented at time of ticketing. Accept original certificate only. Non-extendible, non-combinable with other air travel certificates or discount fare offers (Mileage Plus awards/SilverWings awards/ upgrades/companion/convention/group/tour/senior citizen/ student/child/Round the World fares/travel package/travel industry discount/military/government/joint/interline/wholesale/bulk). Non-transferable, not replaceable if lost or stolen. No cash value; may not be sold or bartered. Protection for flight irregularities will be on United, Shuttle by United, and/or United Express flights only. Discount applies to new purchases only. Certificate may not be used in conjunction with any wholly or partially unused ticket, or with any previously issued non-refundable ticket. One ticket per certificate redeemed. Good for up to two tickets on the same itinerary when purchased at the same time.
14. **Ticketing Restrictions:** Based on the restrictions of the fare purchased, except as noted in above Terms & Conditions.
15. **Refund:** Refund of a Refundable ticket using this certificate will be the amount actually paid by the passenger less the fare amount for transportation used and less any applicable penalty and service charge of $75. Certificate will be forfeited.

Ticketing Instructions:

UAL ATO/CTO, see S*PMO/MPN138

Agencies, see S*PMA/MPN138

1. Treat as type "A" certificate
   - — Endorsement Box: VALID UA ONLY
   - — NVB/NVA: as applicable to fare paid
2. Use TIC/Tkt designator: MPN25D/MPN50D/MPN75D
3. Refer to ARC Industry Agents' Handbook, section 6.0 for details.
4. Failure to comply with promotion guidelines could result in debit memo.

do more AMERICAN EXPRESS® Cards

8 016 7436 000001 7